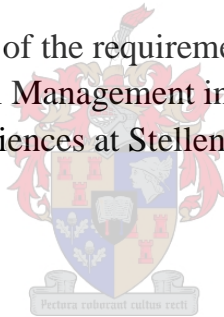


**An Exploratory Analysis on Kayamandi as a Sustainability Conundrum:
*identifying the missing links towards a more sustainable future***

By

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Thesis presented in fulfilment of the requirements for the degree of Master of
Philosophy in Environmental Management in the Faculty of Economic and
Management Sciences at Stellenbosch University



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Declaration

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Abstract

Informal settlements in South Africa are home to a large proportion of the country's population and many of these people live in atrocious conditions which infringe on their basic human rights. It is imperative that the problems synonymous with informal settlements be addressed. Kayamandi is situated on the outskirts of Stellenbosch, a town with abundant financial and human capital and resources. In relation to other informal settlements throughout South Africa, Kayamandi is relatively small. Thus, the progression towards sustainability and development would be deemed to be an easier prospect here than in many other urban areas in South Africa. Evidently, this has not been the case.

This thesis identifies the shortcomings in the way that various proponents of development, such as the private and public sectors as well as non-profit organisations, approach development and sustainability in Kayamandi. The research was conducted through an extensive literature review, case study analysis and qualitative research methods. The aim was to: Identify what the main social, environmental and economic issues are in Kayamandi; To analyse policy, plans and programs and to assess whether these have been practically achieved in relation to the stipulated objectives, and; To assess some of the sustainable development initiatives and programs that have been implemented in Kayamandi with the aim of identifying why sustainable development has as yet not been achieved.

An extensive literature review sheds light on the nature of poverty and informal settlements, while explaining concepts surrounding sustainable development, good governance and how sustainability as a paradigm holds the key to addressing issues synonymous with informal settlements. It also focuses on how sustainable development can unlock the potential of deprived and informal communities. Subsequent chapters give insight on what is prescribed in national policy, plans and programs; what the current situation in Kayamandi is with regards to environmental and socioeconomic issues, as well service delivery, housing and infrastructure delivery; and how the proponents of development have approached development in Kayamandi.

From the research conducted it was found that: There is a lack of good governance; Policy implementation is poor; Developmental initiatives tend to be linear and reactive; There is a lack of innovation; There is poor communication between stakeholder and developmental proponents, which is further exacerbated by tedious bureaucratic procedures, and; There is no clear and comprehensive sustainability framework or plan in place. However, the research

indicates that this can be resolved via several mechanisms and through the implementation of several strategies: By building and developing public and community leadership as well as recognising the importance of knowledge in fostering sustainable development; Improving communication and developing appropriate communication networks and feedback loops between stakeholders and proponents of development; Implementing unbiased, proactive and innovative initiatives which address the triple bottom line of sustainability and; By making use of suitable assessments and indicators alongside an appropriate, inclusive and holistic sustainability plan or framework.

Opsomming

Informele nedersettings in Suid-Afrika is die tuiste van 'n groot deel van die land se bevolking en 'n groot hoveelheid van die mense woon in haglike omstandighede wat inbreek maak op hul basiese menseregte. Die toenemende probleme wat gepaard gaan met informele nedersettings moet aangespreek word. Kayamandi is geleë op die buitewyke van Stellenbosch, 'n dorp met 'n oorvloed van finansiële en menslike kapitaal. Kayamandi, in vergelyking met ander informele nedersettings in Suid-Afrika, is relatief klein. Dus, sou die vordering na volhoubaarheid en ontwikkeling makliker bereikbaar weesgeag word as in ander stedelike gebiede in Suid-Afrika. Klaarblyklik Duidelik is dit egter nie die geval nie.

Hierdie proefskrif identifiseer die tekortkominge in hoe die verskillende voorstanders van ontwikkeling, soos die private en openbare sektore tesame met nie-winsgewende organisasies, ontwikkeling en volhoubaarheid in Kayamandi nader. Die navorsing is gehartig deur middel van 'n uitgebreide literatuuroorsig, gevallestudie-analise en kwalitatiewe navorsingsmetodes. Die doel was om: Te identifiseer wat die belangrikste sosiale, omgewings en ekonomiese kwessies in Kayamandi is; Beleide, planne en programme krities te ontleed in verhouding tot die vasgestelde doelwitte en of hulle in werklikheid bereik was, en; Om deur kritiese beoordeling van die volhoubare ontwikkelings inisiatiewe en programme wat in Kayamandi geïmplementeer is, vas te stel waarom volhoubare ontwikkeling as sulks nog nie bereik is nie.

'n Uitgebreide literatuuroorsig werp lig op die aard van armoede en informele nedersettings,

en brei uit oor begrippe rondom volhoubare ontwikkeling, goeie regering en hoe volhoubaarheid as 'n paradigma die sleutel hou tot die aanspreek van kwessies wat sinoniem is met informele nedersettings en hoe dit potensieël opgelos kan word. Daaropvolgende hoofstukke gee insig oor wat in nasionale beleid, planne en programme voorgeskryf word; Wat die huidige situasie in Kayamandi is met betrekking tot die omgewing en die sosio-ekonomiese kwessies soos goeie dienslewering, behuising en die toestand van infrastruktuur versakaffing, en; Hoe die voorstanders van ontwikkeling tot dusver ontwikkeling genader het in Kayamandi.

Daar is gevind dat: Daar 'n gebrek is aan goeie bestuur; Implementering van beleid is swak; Ontwikkelingsinisiatiewe is geneig om lineêr en reaktief te wees; Daar 'n gebrek is aan innovering; Daar swak kommunikasie is tussen belanghebbendes en ontwikkelings voorstanders, wat verder vererger word deur langduige burokratiese prosedures, en; Daar is geen duidelike volhoubaarheids-raamwerk of plan nie. Maar die navorsing dui ook daarop dat die kwessies opgelos kan word deur 'n aantal meganismes, asook die implementering van verskeie strategieë: Deur die opbou en ontwikkeling van openbare en gemeenskapsleiers sowel as die erkenning van die belangrikheid van kennis in die bevordering van volhoubare ontwikkeling; Die verbetering van kommunikasie en die ontwikkeling van toepaslike kommunikasie-netwerke en terugvoerlusse tussen belanghebbendes en voorstanders van ontwikkeling; Implementering van onbevooroordeelde, pro-aktiewe en innoverende inisiatiewe wat die driedubbele lyn van volhoubaarheid aanspreek, en; Deur gebruik te maak van geskikte evaluering en aanwysers saam met 'n gepaste, inklusiewe en holistiese volhoubaarheid plan of raamwerk.

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List of Acronyms and Abbreviations

ANC	-	African National Congress
BNG	-	Breaking New Ground
CBA	-	Cost-Benefit Analysis
COSATU	-	The Congress of South African Trade Unions
DEAT	-	Department of Environmental Affairs and Tourism
EIA	-	Environmental Impact Assessment
GDP	-	Gross Domestic Product
GSDT	-	Greater Stellenbosch Development Trust
IDP	-	Integrated Development Plan
LED	-	Local Economic Development
MDG's	-	Millennium Development Goals
MSD's	-	Multi-Stakeholder Dialogues
NDP	-	National Development Plan
NEMA	-	National Environmental Management Act
NFSD	-	National Framework for Sustainable Development
NGO	-	Non-Governmental Organisation
NHBRC	-	National Home Builders Registration Council
PPP	-	Policy, Plans and Programs
SD	-	Sustainable Development
SDF	-	Spatial Development Framework
SDI	-	Sustainable Development Initiative
SEA	-	Strategic Environmental Assessment
UN	-	United Nations
UNCED	-	United Nation Conference on Environment and Development
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
WIDF	-	Winelands Integrated Development Framework
IAIA	-	International Association for Impact Assessment

List of Figures and Tables

Figure 3.1: Cycle of Development

Figure 3.2: The National Strategy for Sustainable Development

Figure 4.1: Population Groups of Stellenbosch Municipality 1996, 2001, 2005

Figure 4.2: First Language in Stellenbosch Municipality 1996, 2001, 2005

Figure 4.3: C-Index Kayamandi

Figure 4.4: Map of Modern Day Stellenbosch

Figure 5.1: Capital Expenditure per Strategic Focus Area 2013-2016

Table 6.1: Research Objectives and Research Findings

Table 7.1: Access and Satisfaction to basic services in Stellenbosch Municipal Area (Social Survey, 2005: 5).

Contents

Chapter 1: Research Proposal	12
1.1. Problem statement	12
1.2. Research aim	12
1.3. Motivation	13
1.4. Research objectives	14
1.5. Research methodology	14
1.6. Research Limitations	15
Chapter 2: Literature Review	16
2.1. Introduction	16
2.1. Understanding Poverty	16
2.3. Informal Settlements	18
2.4. Integrated and Sustainable Human Settlements	20
2.5. Sustainable Development	22
2.6. Measuring Sustainability	32
2.7. Informal Settlement Development and Upgrading	38
2.8. Good Governance	40
2.9. Conclusion	46
Chapter 3: Policy, Plans and Programs	48
3.1. Introduction	48
3.2. The South African Constitution	48
3.3. National Environmental Management Act (NEMA)	51
3.4. Environment Conservation Act	53
3.5. Land Tenure Act	54
3.6. Housing Act	56
3.7. Breaking New Ground	57
3.8. Agenda 21	58
3.9. National Development Plan – Vision for 2030	60
3.10. The National Framework for Sustainable Development	65
3.11. Stellenbosch Spatial Development Framework	69
3.12. Conclusion	69
Chapter 4: Stellenbosch and Kayamandi at a glance	71
4.1. Introduction	71
4.2. Stellenbosch: an overview	71
4.3. The origins of Kayamandi	72

4.4. Social movements and community groups.....	76
4.5. Issues facing Kayamandi	78
4.6. Conclusion.....	81
Chapter 5: Proponents of Development.....	83
5.1. Introduction	83
5.2. Proponents of Development	83
5.2.1. Stellenbosch University	84
5.2.2 Non-Governmental Organisations	87
5.3.3. Governmental institutions.....	94
5.4.4. Private Sector	98
5.3. Conclusion.....	101
Chapter 6: Findings	103
6.1. Introduction	103
6.2. Kayamandi: The current situation	103
6.2.1. Environmental issues	103
6.2.2. Socio-economic issues.....	105
6.2.3. Infrastructure provision.....	105
6.3. Governance	106
6.4. The lack of clear-cut sustainability plans, monitoring, evaluation and assessments	107
6.5. The lack of PPP implementation on a local level.....	108
6.6. The reactive and linear nature of developmental initiatives	110
6.7. Innovation and the Effective use of existing resources to promote SD	112
6.8. The lack of municipal innovation	113
6.9. Conclusion.....	115
Chapter 7: Recommendations & Conclusion	117
7.1. Introduction	117
7.2. Recommendations.....	117
7.2.1 Promote and Ensure Good Governance	117
7.2.2. Improve Policy Implementation	120
7.2.3. Service Delivery & Housing.....	122
7.2.4. Create a positive and enabling environment and platform in which SD and initiatives can flourish	127
7.2.5. Develop an inclusive and holistic plan.....	130
7.2.6. Implement unbiased proactive and innovative initiatives, which address the triple bottom line of sustainability	133

7.3. Conclusion.....	134
References.....	139
Addendum 1.....	151
Addendum 2.....	153
Addendum 3.....	156
Addendum 4.....	159
Appendix 1 – Kayamandi Master Plan.....	162

Chapter 1: Research Proposal

1.1. Problem statement

Kayamandi is an informal settlement situated on the outskirts of Stellenbosch in the Western Cape. The town has an abundance of financial and human capital and is situated within an ecologically diverse and environmentally sensitive area. These factors, combined with the town's rich history, have made it a sought-after destination for local and international tourists. However, the abundance of human and financial capital has not as yet been able to curb apartheid legacies. Poor service delivery and resource management have in many ways exacerbated environmental issues whilst doing little to redress social injustices and socio-economic inequalities. The reality in Kayamandi is thus quite far removed from what is envisioned in national policy, plans and programs.

Since the advent of our new democracy and the accompanying change of political dispensation, a wide variety of proponents of development have actively tried to promote development and reduce the gap that has been left by past injustices. However, these change agents and their associated developmental initiatives and programs have seen little success in Kayamandi with regards to overcoming the core challenges that constantly and consistently impede development. These organisations and their initiatives have ultimately failed in securing development that is sustainable, even though it is widely called for in national policies, plans and programs. The reality therefore is that the environmental and socio-economic issues that are synonymous with an informal settlement such as Kayamandi continue to persist, and have yet to be resolved.

The problem here is a practical one and is reflected in the obvious gap in how national policy, plans and programs are implemented, applied and enforced at a local level. It is clear that there is a lack of appropriate frameworks and plans through which national programs can be implemented on a local level. The realisation of sustainable development, which is an overarching theme in national policy and programs, is a complex and daunting task and strategies towards sustainable development lack certain key components.

1.2. Research aim

To identify, via the means of a literature review:

1. What the main social, environmental and economic issues are in Kayamandi.

2. How sustainable development holds the key to overcoming the above mentioned issues and how it can unlock the potential of deprived communities.
3. To analyse policy, plans and programs and to estimate in relation to the stipulated objectives if these have been achieved in reality.
4. Assess and analyse some of the sustainable development initiatives and programs that have been implemented in Kayamandi with the aim of identifying why sustainable development has not yet been realised within Kayamandi.
5. The research aims to find a correlation between these initiatives and why they have, as yet, not promoted sustainable development.

Through this, the research intends to identify the shortcomings in the Stellenbosch municipality and the other proponents of development's strategy with regards to development. From this study recommendations will be developed in order to find plausible solutions whereby future strategies and initiatives can be implemented with more success, which can better reach their intended outcomes, thus ensuring a more sustainable future for Kayamandi.

1.3. Motivation

The lack of good governance and the failure of the various proponents of development and change agents in implementing national policy, plans and programs have meant that sustainable development is still a theoretical pipedream for many communities in South Africa. These failures are visible for everyone to see, nowhere more so than in informal settlements and deprived communities.

In a university town, which aims to be to the innovation capital of South Africa (Stellenbosch IDP, 2014: 12), Kayamandi's infamy continues to dominate the socio-economic landscape of the greater Stellenbosch area. The pollution of the Plankenburg River, the lack of service delivery, health problems, crime and unemployment are issues that continue to persist and that have not been adequately dealt with since our new political dispensation. Many attempts have been made by non-government organisations (NGO's), local government, the University and several private-public partnerships to implement developmental initiatives and programs in order to overcome the challenges synonymous with informal settlements, but with limited

success. The rationale for the research is thus to investigate why, in a town with so much wealth and resources, a relatively small informal settlement cannot be transformed into a sustainable and integrated human settlement?

In South Africa, there remain many urban remnants of the apartheid era, and informal settlements are one of them. Additionally, there remains a significant gap between what is envisioned in governmental plans and documents and what has seen practical, effective application and implementation to date. In order for South Africa to grow and develop sustainably, the reality of these informal settlements has to be transformed and these problems have to be addressed. It is believed that Kayamandi has significant development potential and sustainable development holds the key to unlocking it, while simultaneously ensuring that the rich biodiversity of the surrounding area is maintained.

1.4. Research objectives

1. Analyse the proponents of development and their developmental initiatives and programs in Kayamandi with the aim of identifying why they have not yet effectively promoted sustainable development.
2. Identify the missing links and give meaningful feedback or recommendations on how national policy can be better realised and implemented as well as how the relevant proponents of development can ensure sustainable development.

1.5. Research methodology

With the overall aim and objectives of this thesis in mind, a combination of empirical and non-empirical research is used. The majority of research is non-empirical and consists of a literature review, where primary and secondary literature sources would be used as a contextual framework. The unit of analysis for the research project is a qualitative case study with different sub-cases as the proponents of development investigating the developmental issues in Kayamandi and how these issues can be overcome in order to promote sustainable development.

With regards to empirical research a variety of primary data sources are used. The research is dominantly study orientated, using several case studies of the various proponents of development and their developmental initiatives in Stellenbosch and Kayamandi. Qualitative

research methods are utilised, by interviewing project leaders and managers which were key agents in the implementation of these projects in order to gain an in depth understanding about what the successes and failures of these initiatives have been, as well as what some of the key challenges towards development in Kayamandi are. The research methodology incorporates unstructured interviews that aim to explore a general area of interest in depth and are utilised to support qualitative or explorative data. Interviews are theme based to stimulate discussion regarding the research question and aims and objectives. Complexity theory is used to assess the different variables and elements between the literature review, qualitative research methods and the case study as well as the interaction between.

1.6. Research Limitations

The research at hand faced several limitations. The lack of empirical data and primary data sources relating specifically to the case study at hand impeded the overall quality of the research. Additionally, there was lack of responsiveness and feedback from individuals who are directly linked to the various proponents of development. Thus, impeding the overall quality of data and opinions aimed to be generated by the qualitative research methods. The lack of responsiveness from individuals directly associated with the proponents of development in conjunction with the lack of primary data sources directly linked with the case study subsequently meant that the opinions expressed and the data made available in the study might not reflect the entire state of affairs in Kayamandi. It was only possible to interview a few individuals, therefore the interviews can only be used to reflect opinions rather than be used as a primary data source.

Chapter 2: Literature Review

2.1. Introduction

The nature of the environment and many of its associated problems are immensely complex. Human interactions with the environment have in many cases resulted in what Carley and Christie (2000: 155) call metaproblems. At the root of these metaproblems lie rapid urbanisation and the ever-increasing demand to fulfil the growing population's needs. This gives rise to a turbulent environment which is characterised by: Uncertainty; Inconsistent and ill-defined needs, preferences and values; Unclear understanding of the means, consequences or cumulative impacts of collective actions, and; Fluid participation in which multiple, partisan participants vary in the amount of resources they invest in resolving problems. Few things fit this description better than informal settlements in South Africa.

Consequently, this will act as the theoretical point of departure for the intended research of this thesis. Why, in a town such as Stellenbosch, that has a vast array of resources, wealth and expertise, hasn't social justice been enacted for those who have suffered in the past and why hasn't sustainable development been able to get a foothold in Kayamandi? Policy is intended to reflect the voice of the people, and much of South African policy is geared towards the promotion of sustainable development (SD) and the rectification of historical injustices. Yet the headway made in this regard remains entirely insufficient.

This literature review will critically analyse the concept of SD and what is required in order to achieve SD. Poverty and the nature of informal settlements will be examined in order to give context to the research at hand. Light will be shed on the current environmental and socio-economic issues that tend to be tantamount with informal settlements. Finally, the monitoring and evaluation of SD will be deliberated in order to give perspective on how SD can be measured with regards to the intended objectives stipulated in policy, plans and programs (PPP).

2.1. Understanding Poverty

The word 'poverty' immediately conjures images of starvation, overcrowded informal settlements, disease and crime. These images generally form the conceptual basis of what most people believe poverty entails. However, the poor tend to have their own understanding and interpretation of their social and economic reality (Davids, 2011: 37). The poor tend to

associate their socio-economic situation with a lack of power as well as income and resources to make choices and take advantage of opportunities.

By examining the simple yet effective hierarchy of needs as proposed by Maslow (1943) it is evident that of the five levels depicted by his model, which include physiological needs, safety, social, esteem and self-actualisation, in informal settlements, it is seldom that even the most basic of these needs are met. Bartelmus (1994: 2) supplements the basic needs argument by suggesting that humans have several primary objectives: Affection and love; Recreation and entertainment; Education; Human freedoms/security; Shelter; Aesthetic/cultural values; Political equity; Health; Physiological needs, and; Future quality of life. Basic needs are what philosophers call categorical needs; these are needs that must be met in order for human beings to function. There is no doubt that food, clothing, shelter and fuel for heating and cooking are categorical needs imperative to human survival.

Lok-Dessallien (1999:2) states that poverty can be viewed in relative or absolute terms. Absolute poverty is defined as a “condition characterised by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information”. Poverty is not only dependent on income but also on access to services (Bradshaw, 2001: 4). Relative poverty, on the other hand, compares the lowest socio-economic strata of the population with the upper strata and is generally measured in income quintiles (Lok-Dessallien, 1999:2). It is estimated that roughly 23 million South Africans live under the upper-bound poverty line (Poverty Trends in South Africa, 2014).

Several perspectives exist on understanding and measuring poverty. These include the income perspective, the human development perspective and the social exclusion perspective, to name but a few. However, with regards to the research and our understanding of sustainable development and informal settlements, the basic needs and sustainable livelihoods perspectives give us the best understanding of what it means to be poor and how to curb poverty. The basic needs perspective focuses on physical infrastructure as well as social infrastructure. The rationale behind this perspective is the notion that these basic human needs have to be fulfilled in order to move communities out of poverty. The sustainable livelihoods perspective stresses the importance that individuals play in defining and solving their own poverty through participation and engagement. This is crucial in shaping developmental strategies. This perspective focuses on vulnerability and the inability

to cope with hardship rather than poverty per se. From this perspective social issues alongside economic issues come to the fore (Davids, 2011: 39-40).

Putting aside arguments on the most effective means to measure and define poverty, Landman (2003: 1) argues that estimates suggest that between the year 2004 and 2014 40% of South Africans will live in poverty, with the poorest 15% in a desperate struggle to survive. Translated into practical terms, this effectively means that 18 million people have not yet benefited from our new political freedom and dispensation. This reality is reflected in informal settlements where a large majority of South Africa's poor live and where poverty and inequality is generally further exacerbated.

2.3. Informal Settlements

Now, for the first time in South African history, more people live in cities than in rural communities, with a large amount of these people living in insecure and impoverished conditions or informal settlements (Tshikotshi, 2009: 17). It is estimated that around 1.2 million households live in informal settlements in South Africa where atrocious conditions pose significant threats to their health, security, safety and wellbeing (Ziblim, 2013: 1).

Informal settlements are phenomena that generally tend to occur in developing countries and newly industrialised countries. They are generally also known as slums, shanty towns, favelas or squatter settlements (Hofmann et. al, 2006: 1). The UN Habitat program (2012) defines informal settlements as: *“residential areas where a group of housing units has been constructed on land to which the occupants have no legal claim, or which they occupy illegally. Furthermore, an informal settlement can be regarded as an area where housing is not in compliance with current planning and housing regulations i.e. unauthorized housing”*.

Primarily, it is government's inability to cope with housing needs in urban areas alongside rapid urbanisation that contributes to the development and growth of informal settlements. Urban sprawl has proven to be an inescapable consequence of urban growth and thus is significant when examining informal settlements. It is a multifaceted concept and essentially refers to the outwards spreading of urban environments and its suburbs to a low density and auto-dependant development on rural land. This enforces a high segregation of uses and various design features that encourage automobile dependency. In a sense, informal

settlements are a product of the high urban population influx and urban sprawl (Brunner, 2012: 1). Additionally, the growth and development of informal settlements can generally be attributed to lack of governmental control or poor governance.

In South Africa, empirical studies have shown that rapid urbanisation over the past two decades alongside apartheid legacies has produced considerable challenges, like an ever-worsening urban housing deficit, social exclusion and the emergence and growth of informal settlements around cities. These challenges are exacerbated by appalling wage levels, high rates of unemployment, increasing income inequalities, and extreme poverty (Ziblim, 2013: 7). Another fundamental issue surrounding the escalating housing deficit is the growth of informal settlements as well as the transient nature of residents within such settlements, which can be attributed to temporary labour migration or the capacity of a migrant to find employment elsewhere. The largest population migration by race has been under the black population, with an estimated 3,750,000 who were migrants over the period 1996- 2001 (Moreke, 2009: 15).

Urban informal settlements are characterised by unplanned and illegal housing units or dwellings that are constructed out of salvaged materials such as wood, tin, corrugated iron and other waste materials. These makeshift shelters and their surrounding communities generally lack basic amenities and infrastructure such as sanitation, water supply, drainage, waste disposal or proper road access (Tshikotshi, 2009: 2). Informal settlements are a characteristic feature of the urban landscape in South Africa. These settlements are generally linked with a wide variety of social, economic and environmental issues.

Apartheid planning alongside improperly planned urban growth has meant that informal settlements are generally located on inappropriate sites. These sites are inappropriate because they are far from urban centres or economic activity, causing long commutes which generates high individual and public costs alongside increased pollution from vehicle emissions. These inappropriate sites are also generally far away from existing infrastructure lines which drastically increases infrastructure expansion costs (Ferguson, 1996: 173). Broadly speaking, poor housing and environmental conditions are interlinked concerns with regards to informal settlements. There is a strong association between environmental health problems and urban poverty (Satterthwaite, 2002: 28). However, these environmental challenges which have an adverse effect on the communities' health are associated with unplanned use of land which

contributes significantly towards urban sprawl as well as decreased quality of life, increased waste, air pollution and the pollution of surrounding water bodies. The situation also adversely affects the quality of life in the “formal” areas of the city, where urban run-off and downstream pollution from garbage and sewers that discharge directly in rivers pose serious environmental as well as health threats (United Nations, 2009: 40). Informal communities exist at a close interface with their surrounding environment, constantly having to adjust to environmental changes. Households within such settlements often fail to adapt due to the insufficient resources (Tshikotshi, 2009: 17).

Ferguson (1996: 173) argues that informal settlements threaten environmentally sensitive areas due the lack of appropriate infrastructure. He further argues that the threat is mutual, informal housing units are often located on steep hills that increase the risk of landslides, which exposes the household to environmental threat too. Further environmental hazards faced include flooding, poor drainage, fire and environmental pollution among many others. These challenges create health risks for the residents, often children and women, and threaten their livelihoods. Additionally, the growth of informal settlements contributes towards exacerbated environmental degradation on several levels: Erosion from unpaved and undrained surfaces; the pollution of water due to inadequate sewer systems and; the dumping of garbage along roads or near water bodies (United Nations, 2009: 40). These arguments clearly substantiate the claims that the urban poor and informal settlements have a negative impact on the environment, but that these people are, in turn, also more exposed to environmental conditions that may affect their health and livelihoods.

In order for South Africa to secure a more sustainable future, it is of the utmost importance to try and address these issues in informal settlements while also limiting further informal settlement growth and expansion. Environmental managers should actively try to promote sustainability in such areas, as they tend to have drastic environmental impacts, which could be significantly reduced through sufficient and adequate planning, management and governance.

2.4. Integrated and Sustainable Human Settlements

In an increasingly urbanised world, the need for sustainable city and settlement development is becoming acute. This reality, reflected by a reduction in rural population and an increase in the number of people living in urban informal settlements epitomises the need for sustainable and integrated human settlements. Integrated and sustainable human settlements have a

greater chance to address developmental and environmental issues faced by South Africa and the developing world. By creating a platform whereby such settlements can be established will go a long way in resolving the social, economic and environmental issues synonymous with the urban poor and informal settlements.

The heritage of apartheid and colonialism left their mark on the South African urban landscape in the form of physical, social and racial separation, segregation and fragmentation. The past decade has seen an improved quality of life in urban and rural environments throughout the country with poor communities enjoying increased access to water, electricity and sanitation. Despite this, there are still serious spatial and functional inequalities. In the Western Cape, social and class divides are a real and growing concern, with tenuous racial dynamics being more pronounced here than in most parts of the country. This is mainly due to the political history of the province. It is therefore imperative that this trend has to be broken and that we start transforming our communities, urban areas and informal settlements into more sustainable and integrated human settlements. However, there are several constraints standing in the way of transforming informal settlements into integrated and sustainable human settlements.

Key blockages to the delivery of adequate housing in general, and the Western Cape specifically are:

- Inadequate resources for housing and urban development
- Lack of a long-term housing plan
- Lack of understanding of the housing problem
- Lack of capacity for appropriate housing delivery
- Access to well-located land for housing
- The NIMBY syndrome
- Access to appropriate housing credit
- Policy incoherence and frequent policy changes

Urban settlements offer a concentration of goods and services like water and sanitation, garbage collection, electricity, roads, hospitals, schools, fire services, access to economic

opportunities, and more. On the other hand, cities can also be environments where challenges are concentrated. In South Africa, unravelling the complex challenges entrenched by apartheid spatial constructs, including the distance of townships from economic opportunities and necessary services, has proven to be a mammoth task. Complex roles and authority structures within and between national, provincial and local government spheres slow down the rate of housing and sustainable settlement delivery. However, the creation of integrated and sustainable human settlements is believed to hold the key to overcoming these challenges (Smeddle-Thompson, 2012: 8)

According to Girardet, a sustainable city is: “*a city that works so that all its citizens are able to meet their own needs without endangering the well-being of the natural world or the living conditions of other people, now or in the future* (Girardet, 2004:419)”. This is some distance away from the current state of affairs in Kayamandi and many other informal settlements in South Africa and the world. Clearly, it is evident that a sustainable and integrated human settlement is dependent on a variety of factors. For an informal settlement to start becoming an integrated and sustainable human settlement will rely on mass social reform which can be put into action by creating strong community leaders and leaders within management structures. This should then be followed by improved and informed decision-making which can be established through employing effective and efficient means of stakeholder engagement, suitable assessments and the use of appropriate indicators. This will ensure improved policy, policy indicative of the needs of the community. Finally, the implementation of policy then needs to be improved. However, this final link in the chain is also dependant on the creation of suitable leaders and managers within decision-making and management structures.

Clearly, settlements and urban areas in South Africa and especially Kayamandi is not an integrated and sustainable human development. Clearly, it is imperative that informal settlements in South Africa needs to be transformed into more sustainable entities in for the benefit of current and future generations and with the aim of meeting national and international development programs such as the National Development Plan and the Millennium Development Goals’ goals and objectives.

2.5. Sustainable Development

Historically, development has proven to be a largely unsustainable practice, which is why the situation has become urgent. In order to understand the context of SD as used in this thesis, a

contextual overview is necessary. What is it? Where did it come from? How does South African policy define the concept? From this overview a closer look can be given into what is meant by SD initiatives and how these initiatives are intended to promote sustainability.

Swilling and Annecke (2012: 27-28) give insight into and places emphasis on the need and importance for SD by referring to the “seven documents that changed our view of the world”.

The documents include:

- The Millennium Eco-system assessment (2005);
- The Intergovernmental panel on climate change (2007);
- The World Energy Outlook (2008);
- UN Human Development Report (1998);
- The Challenge of Slums (2006);
- The International Assessment of Agricultural Knowledge (2008) and;
- The International Resource Panel (2011).

These documents each focus on the following aspects: eco-system degradation, global warming/climate change, inequality, peak oil, urban poverty, food insecurity and finally, material flows. These documents clearly explain the urgent global need for a move towards SD and ultimately lay the foundation of modern sustainability science. They also introduced many readers to the harsh global realities, not to mention those that hit closer to home. In addition these documents warn us that our current development trajectory of humanity is not feasible, but more importantly, that it is not sustainable. The grim future painted by these documents serves as a warning about unsustainable practices and the catastrophic impact they can have on the natural world and our ability to survive in it. They consequently make a strong case for the urgent need for increased SD initiatives across all spheres of human culture, a case that is slowly gaining momentum but which is still in dire need of stronger application.

SD is seen as the key to alleviating these issues due to the principles and objectives that are instilled in the sustainability paradigm; Bartelmus (1994: 8) argues that the objectives of SD include the following:

- Reviving growth;
- Changing the quality of growth;
- Meeting essential needs for jobs, food, energy, water and sanitation;

- Enhancing and conserving the resource base;
- Reorientating technology and managing risk; and
- Merging the environmental and economics in decision-making.

2.5.1. Sustainability Science: A brief history

SD as a concept has a wide array of interpretations and several permutations on the concept do exist, but at its core it ultimately tries to address and bridge the gap between the crises of justice and nature (Sachs, 1999:28). The starting point for the concept of SD arose out of the need to integrate environmental considerations with economic policy. Additionally, it aimed to bring environmentalist ideas into the arena of central policy (Dresner, 2002: 1). The most well-known and the first notable use of the concept were by the Brundtland commission (1987), where SD was defined as: “*development that meets the needs of present generations without compromising future generations’ ability to meet their own needs*”. However, SD is much more than this. The concept of SD and how it was conceived and evolved can basically be categorised into three historical periods: Pre-Stockholm, which covers the period until the Stockholm Conference on Environment and Development (–1972); from Stockholm to WCED (1972–1987); and Post-WCED (1987–1997) (Mebratu, 1998:497).

At the core of the sustainability concept, it essentially comes down to a tug of war between needs and limitations. Here “needs” refers to the needs of the world’s population in general, and in particular, to the needs of the poor. “Limitations” refers to the restrictions of current technology and social structures as well as the finite amount of resources needed by humanity (Mebratu, 1998:501). SD aims to address many of society’s economic, social and environmental problems. The crux of the matter, however, is that we only have a finite amount of natural resources with which to fulfil a growing population’s needs (Hopwood, 2005).

2.5.2. Sustainable Development: A definition

If one analyses the concept of SD it is important to identify what has to be sustained:

- The environment i.e. earth, biodiversity and ecosystems;
- life support – ecosystem services and resources;
- Community – cultures, groups and places.

That which has to be developed:

- People – by improving child survival, life expectancy, education, equity and equal opportunity;
- Economy – wealth, consumption and productive sectors;
- Society – social capital, institutions, states and regions (Kates, Parris and Leiserowitz, 2005: 11).

SD is development that comprises three key factors: the social, the environmental and the economic. Good governance can essentially be seen as the link that ties the three pillars together and is thus an important feature in sustainability science and theory. Thus development has to consist of what is referred to as the triple bottom line of sustainability, while simultaneously always upholding the foundational principle that present generations can meet their needs without compromising future generations' ability to meet theirs. Crucial to this is the fact that, historically, the benefits of development have not been equally shared, which has resulted in inequality across these three pillars. SD intends to rectify this and undo the injustices of the past (Harris, 2000: 4). In a South African context, the most notable use of the SD concept is NEMA's (1998) definition of the concept. NEMA defines SD as: *the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations*".

Rogers, Jalal and Boyd (2005: 47) argue that poverty, population, pollution, participation, policy and market failures (including good governance), and prevention and management of disasters alongside climate change mitigation are all key factors governing SD. Fundamental to the success of SD is not only dependant on good governance and how sustainability principles are incorporated into the state's planning and policy documents, but also how these principles are applied and implemented in practice and how progress is measured over the coming years.

2.5.3. The complexity surrounding SD

When assessing SD in the context of a community or informal settlement, it must be acknowledged that such an entity consists of multiple networks on a variety of levels, giving rise to a complex entity that cannot be dealt with in a linear way. Much of what impedes the success surrounding SD is due to the complexities surrounding the concept. The first complexity resides in the need to incorporate three values (environmental, social and economic) at the same time, but also due to the fact that human behaviour often influences

these factors simultaneously. Secondly, complexity arises due to the need to operate in multi-actor policy context (Runhaar, Dieperink and Driessen, 2006: 34).

Nooteboom (2007: 648-650) argues that when analysing SD, key ideas from complexity theory can be applied. He argues that policy innovations are often met with negative feedback either during or before implementation. It is however important to note that even negative feedback may be positive at another system level. In such complex social networks such as communities, it is often that these systems encounter barriers such as political disputes. It is important to note that a system only changes when it is under pressure. The ability of a system to react to pressure and ultimately change rests upon several factors. These factors include: the willingness to invest in change, the available social capital, the legal culture etc. The necessity for SD outweighs the complexity inherent to its achievement.

2.5.4. Sustainability Constraints

Evidently achieving SD as well as incorporating sustainability into planning is a difficult and complex task, but ensuring that SD is achieved in practice is even more daunting. The South African Constitution alongside policy and legal frameworks are well known for being progressive and inclusive, but the implementation of policy in South Africa remains jarringly inadequate. In reality, huge disparities exist between policy objectives and their results. Policy objectives are generally not met, so what are the most important factors standing in the way of achieving sustainable development in Kayamandi but as well as the rest of South Africa?

Government's failure in achieving the pre-determined sustainability objectives can be attributed to the many well-known constraints that impede the implementation and success of sustainability initiatives. The document: *An Action Agenda for Sustainable Development* (2013: 8-23) lists ten priority challenges which need to be overcome in order for SD to flourish in Africa:

- End extreme poverty and hunger;
- Achieve development within planetary boundaries;
- Ensure effective learning for children;
- Achieve gender equality, social inclusion and human rights for all;
- Achieve health and wellbeing at all ages;

- Improve agriculture systems and raise rural prosperity;
- Empower inclusive, resilient and productive cities;
- Curb human-induced climate change and ensure clean energy for all;
- Secure ecosystem services and biodiversity; and
- Transform governance for sustainable development.

Eyong and Foy (2006: 136-140) supplement the sustainability constraints argument by listing several key issues that repels sustainability in sub-Saharan Africa. These include: poverty and declining incomes, heavy debt burden, capital flight, high dependence on foreign aid, high fertility, rapid urbanisation, lack of democratic commitment, and the mutual distrust among ruling elite.

More importantly, in South Africa a number of institutional challenges exist which tend to hamper SD. They include: the politics of funding, democracy and institutions, financial and administrative competence and nepotism and corruption.

2.5.4.1. Politics of funding

Municipal finance in South Africa is derived from four main sources: local rates and taxes; charges for various services performed by the municipality such as electrical, water supply, sewerage and refuse collection charges; other income, often from investments, loans or bonds, and; government subsidies (the so-called Equitable Share) and grants (Koelbe and LiPuma, 2010: 571). The way in which municipal finance is obtained has a significant impact on the way in which it is spent. In the case of Stellenbosch, these taxes are collected from the affluent neighbourhoods in Stellenbosch. A large majority of Kayamandi's residents do not pay rates and taxes. This can be attributed to high unemployment rate and low wage levels as well as due to the illegal nature of informal settlements.

The municipality is able to generate their own revenue: however, to the contrary, they are challenged by those who become part of the indigent. This has an impact on the municipal funding capacity to further development and becomes unsustainable in itself. It is of significant importance therefore that an organisation i.e. municipality in this instance effectively manages, monitors and evaluates how their funds are being

spent in relation and in terms of the Municipal- or Provincial Finance Management Act.

2.5.4.2. Democracy and institutions

It has been argued that the role and function of local government is not fully understood by most of those in administrative and political positions at the local level. Further, the institutions of national government do not pay sufficient attention to the policy failures at the local level. These failures are then exacerbated by one, or a combination, of these three factors: administrative incompetence; corruption and non-communication, and; unaccountability by local government officials to their constituencies (Koelbe and LiPuma, 2010: 578). In Kayamandi's case it is well known that land reform has been a major issue in Stellenbosch and fuelled the growth of the informal settlements. A large proportion of land evictions that have happened around Stellenbosch have been illegal. The majority of farm workers do not know their rights under the extension of Security of Tenure Act (ESTA) of 1997. Additionally, there is a lack of compliance and effective enforcement of the legislation (Nicks, 2012: 23). This is a huge issue which impedes sustainable growth and development in Kayamandi.

2.5.4.3. Financial and administrative competence

Koelbe and LiPuma's research results (2010: 579) illustrate that municipal government suffers from a severe lack of managerial and other skills. In many cases, municipal officials and councillors have limited experience in the field of municipal service provision. As a result of the efforts to cleanse the civil service of those appointed during the apartheid regime, many experienced civil servants were lost to the municipalities and replaced by lesser-qualified or often completely unqualified candidates. Moreover, many of the financial officers are not able to draw up accurate and reliable budgets, even when the figures they are asked to work with are fixed and straightforward. Swilling and Peter (2012: 28) argue that in order for urban areas to be transformed into more sustainable entities, the themes surrounding infrastructure needs to be transformed. Policies and frameworks surrounding infrastructure planning and design have to be changed in order to promote sustainability in informal settlements. This calls for high levels of expertise and capacity of the institutions and their employees who are involved.

2.5.4.4. Nepotism and corruption

Most worrisome are the increasing occurrences of corruption, nepotism and self-enrichment that have manifested itself within all three spheres of government. This establishment of a 'culture' of self-enrichment where municipal officials who have been appointed, as well as elected officials, steal from the taxpayers, drastically curbs resource allocation (Koelbe and LiPuma, 2010: 584). The South African government is rife with corruption, a fact that is most prevalent in tender applications for the provision or upgrading of infrastructure, especially in informal settlements. This misallocation of scarce and valuable resources has significant effects on infrastructure provision and development in general.

Additionally, Van Wyk, Cousins and Lagardien (2004: 128) identified several issues regarding the long-term success of sustainable development initiatives in informal settlements: Health issues, the transient nature of residents, and the fact that maintenance is a key issue and the fact that initiatives cannot have value or be deemed effective if still reliant on external funding. These are key issues managers, planners and change-agents need to take in account when devising SD strategies or when attempting the implementation of a development initiative.

The failures of local, provincial and national government are having a tremendously negative impact on Kayamandi and other informal settlements like it. There is enough money to solve the majority of Kayamandi's problems and make active headway towards a more sustainable future, but every step forward leads to two steps back. Even when the municipality is generating enough money, the money and other resources are too often mismanaged by ill-equipped officials with corrupt self-enrichment goals. If this problem is not addressed on all levels, SD will forever remain a distant objective.

2.5.5 Towards Sustainable Development

The use of the nation's resources for the fulfilment of the basic needs of its people on as many levels as possible is a constitutional right in South Africa. It is SD's role to ensure that this happens. Theorists and experts have developed a variety of theories, strategies and approaches to achieve this. Local community and grass roots development form the basis of a

larger sustainable development debate in which government, alongside other organisations, is trying to solve these developmental problems that are associated with poverty and informal settlements. It is the opinion of this dissertation that this approach has the greatest potential for success.

2.5.5.1. Local economic & community development

Evidence suggests that globalisation has had a significant impact on traditional top-down development strategies, and is struggling to cope and deliver the necessary results needed to ensure development that is sustainable. Amid dwindling results, they seem more and more inadequate for tackling complex development problems. Thus, local economic development (LED) has been used as an alternative or a complimentary strategy to ensure that developmental targets are reached (Tjimstra, 2009: 6).

LED is a process of strategic planning undertaken by private-public partnerships and NGO's. The primary objectives surrounding LED is to stimulate investments that will promote a sustained high growth within a local community whilst focusing on a region or community's potential. LED identifies specifically what local stakeholders can and need to do to ensure that their local community reaches its full potential. In other words, LED assesses a community's comparative advantages, identifies new and existing market opportunities and reduces obstacles associated with business expansion and development.

Several LED approaches exist: the public-private partnerships approach; Small business approach; Regional Approach, and; the sector-cluster approach. All of these approaches aim to create new jobs, retain existing jobs, and help businesses access capital in order to take advantage of new market opportunities (Agency for International Development, n.d: 1-2).

Grass roots development and LED are married in the sense that they call for bottom-up rather than top-down development, and both of these strategies are confined to certain geographical areas or communities with the intention of empowering a certain set of individuals. Grass roots development and LED are valuable strategies when considering SD and should be used alongside developmental initiatives in order to reach sustainability objectives.

2.5.5.2. Developmental initiatives

With regards to the intended research and the case study at hand, it is important to explore the concept of a developmental initiative. A developmental initiative can be regarded or defined as any initiative (i.e. any program, policy, project or undertaking) which is administered or implemented by the private sector, any of the three tiers of government (national, provincial or local), non-governmental organisations, or via the means of private-public partnerships. If such an undertaking aids development in any way or is applicable to the triple bottom line of sustainable development (social, economic, or environmental) it falls within the scope of what can be regarded as a developmental initiative.

Seyfang and Smith (2007: 585) argue that sustainable development initiatives need to be innovative in the sense that they can be implemented at grass roots level where they can empower and enforce the principles of SD. They continue by arguing grassroots action for SD can be manifested in a variety of forms such as furniture recycling, social enterprises, organic gardening cooperatives, low-impact housing developments, farmers' markets and community composting schemes. Development is complex and multi-dimensional and can manifest itself in a wide variety of ways. Development is not dependant solely on government or NGO's, the essence of development and the success thereof is dependent on a network of feedback loops and the cooperation between a multitude of institutions as well as stakeholders.

The change agents who implement these developmental initiatives have to consider a variety of factors when designing and implementing initiatives: Access to employment and other livelihood opportunities; access to the political system; access to the legal system, and; access to housing and infrastructure (Misselhorn, 2008: 5). These factors are generally almost non-existent in informal settlements, and can drastically impede the continual success of developmental programs. Rennkamp (2013: 4) argues that in an evaluation of 30 sustainable development plans and their associated initiatives, it does not necessarily matter if sustainability objectives are explicitly mentioned in these plans. It is more important for integration if the goals are well specified. She continues by suggesting that planning stages need to be carefully assessed along implementation and outcomes.

What can be deducted from Rennkamp's argument is that good planning and design of initiatives are central to the long-term success of any sustainable of developmental initiative.

However, this can only be facilitated through good governance. Good governance constitutes good planning and design, implementation, and monitoring and evaluation.

2.6. Measuring Sustainability

2.6.1. *Indicators and Indices*

If long term sustainability is to be a reality the use of appropriate and effective indicators and indices are of the utmost importance. Indicators should be context specific and should gauge the success of developmental initiatives. Human-environmental systems are complex and multi-dimensional and are influenced by several factors. An indicator describes one characteristic of the state of the system. When many indicators are used they are presented in a framework of categories, or aggregated into an index. It is crucial that such an index must track indicators from the environmental, social and economic dimensions (Mayer, 2008: 279).

Innes and Booher (2000: 173) identified that indicators must be developed with the participation of those who will use them and learn from them. The Cape Town sustainability indicators report (2004: 2) focuses on three key concepts surrounding sustainability: living within limits, equitable distribution; and recognition of the interconnected nature of the world. Essentially, SD in South Africa should consist of the biophysical, economic, social factors and the good governance surrounding the attainment of these objectives (Blewitt, 2008). Ensuring the success of these 3 key objectives relies on the measurement of each of these objectives. However, choosing which indicators to use to measure what can be a daunting task.

For cities to measure their level or achievement of sustainability, indicators are crucial tools to inform decisions, measure achievements of set targets, and monitor the sustainability of policies, with a view to addressing areas of concern. Urban sustainability encompasses the following dimensions:

- Economic sustainability – the ability of the local economy to sustain itself without damaging the natural resource base;

- Social sustainability – a set of actions and policies aimed at the improvement of quality of life and fair access and distribution of the use of the natural and built environment;
- Ecological sustainability – the impact of urban production and consumption on the integrity and health of the city-region and global carrying capacity;
- Physical sustainability – the capacity of the urban built environment and techno-structures to support human life and productive activities and;
- Political sustainability – the quality of governance systems and public policies used to guide the relationship and actions of different actors within the socio-economic, ecological and physical dimensions of sustainability (Ndeke, 2011: 2 &16).

The use of urban sustainability indicators is crucial in facilitating target setting, communication between policy makers and the public, as well as performance reviews (Shen, Ochoa, Shah and Zhang, 2011: 17).

With the aim of promoting sustainable urbanisation, specific sets of indicators as well as frameworks have been developed in order to monitor and understand specific changes related to sustainability. Core indicators fulfil three criteria. First, they cover issues that are relevant for sustainable development in most countries. Second, they provide critical information not available from other core indicators. Third, they can be calculated by most countries with data that is either readily available or could be made available within reasonable time and costs (Economic & Social Affairs, 2007:9)

Shen, Ochoa, Shah and Zhang (2011: 23) list several indicators which can be used in order to measure urban sustainability over time. It is imperative that a combination of environmental, social, economic and governance indicators are used in order to adequately gauge the performance of developmental initiatives as well as sustainability plans. These indicators include:

- Environmental – freshwater, wastewater, pollution, geographically balanced settlement, biodiversity, quality of ambient air and atmosphere;
- Economic – consumption and production patterns, economic development, finance and the strengthening of micro-enterprises;

- Social – Education, health, safety, poverty, security of tenure and access to land; Governance – participation and civil engagement, transparent, accountable and efficient governance, and finally; The sustainable management of authorities and business.

When developing sustainability plans, the selection of appropriate targets is crucial. These targets should be realistic in the sense that they can be obtainable, but they have to challenge decision-makers to improve current conditions and move away from the status quo. Progress towards these targets is measured by indicators. Crucially, the selection of indicators should be explicitly based on the desired outcomes that intend to be reached via the implementation of a sustainable development plan or framework. Walmsley (2002: 197) argues that sustainability indicators should be placed within frameworks, because it is essential in assisting the development and reporting on indicators, so that key issues can readily be identified and summarised. Two main types of framework are available, namely economic frameworks and physical environmental frameworks. The economic frameworks tend to favour “weak sustainability” (i.e. where manufactured capital can take the place of natural capital), while the physical environmental frameworks tend towards “strong sustainability,” where spent natural capital cannot be replaced.

Themes for sustainability indicators tend to subscribe to one of the following (Economic & Social Affairs, 2007: 10):

- Poverty
- Governance
- Health
- Education
- Demographics
- Natural hazards
- Atmosphere
- Land
- Oceans, seas and coasts
- Freshwater
- Biodiversity
- Economic development

- Global economic partnership
- Consumption and production patterns

Walmsley (2002: 196) states that since the application of the Breaking New Ground document by South African government has led to the acceptance of sustainability indicators as basic tools for facilitating public choices and supporting policy implementation. These indicators enable decision makers to: monitor and assess conditions and trends on a national, regional and global scale; compare situations; assess the effectiveness of policy-making; mark progress against a stated benchmark; monitor changes in public attitude and behaviour; ensure understanding, participation and transparency in information transfer between interested and affected parties; forecast and project trends, and; provide early warning information.

Walmsley (2002: 197) continues by suggesting that with respect to policy relevance and utility for users, an indicator should:

- Provide a representative picture of environmental conditions, pressure on the environment or society's response;
- Be simple, easy to interpret, and able to show trends over time;
- Be responsive to changes in the environment and related human activities;
- Provide a basis for comparisons;
- Be either national in scope or applicable to issues of national significance (e.g., catchment management); and
- Have a target or threshold against which to compare it so that users are able to assess the significance of the values associated with it.

With respect to analytical soundness, an indicator should:

- Be theoretically well founded in technical and scientific terms;
- Be based on international standards and consensus about its validity; and
- Lend itself to be linked to economic models, forecasting and information systems.

With respect to measurability, the data required to support the indicators should be:

- Readily available or made available at a reasonable cost;
- Adequately documented and of known quality; and

- Updated at regular intervals in accordance with reliable procedures

2.6.2 Assessments

2.6.2.1. Strategic Environmental Assessments

Strategic Environmental Assessment (SEA) can be regarded as the “big” brother of EIA. SEA is a support instrument for decision-making for the formulation of sustainable spatial and sector policies, plans and programs (Fischer, 2002: 156-164). SEA is marked by instrumental rationality and focuses on integrating sustainability considerations into the formulation, assessment and implementation of PPP (DEAT, 2007a: 53).

Alshuwaikhat (2004: 309) defines SEA as a formalised, systematic and comprehensive process of evaluating the environmental impacts of PPP, including the preparation of a written report on the findings and using the findings effectively within decision-making. The rationale for the application of SEA's is the notion that if there is a policy that precedes a plan and ultimately a project, then SEA should be applied at policy level first, as tiering is designed to ensure that duplication is avoided.

The concept of SEA was originally derived from project-based EIA and can effectively be used alongside the project-based tool to address its many shortcomings with regards to the promotion of sustainability-focused indicators. SEA's are proactive in the way in which they inform development proposals and addresses areas, regions and sectors of development. The assessment can be designed to ensure that the right information is available to inform multiple decisions of an extended period of time while enabling the creation of a framework against which benefits and impacts can be measured. It can also be used in order to gain a better understanding of alternative courses of action which may ultimately promote sustainable development Fischer (2002:164-165). Crucially, it addresses cumulative impacts and the identification issues and implications for SD and is more about process than product (DEAT, 2007a: 54).

With the aim of promoting SD, SEA's can overcome the limitations that constrain other assessment tools such as EIA's by acting as a roadmap towards SD (Alshuwaikhat, 2004: 307). Fischer (2002:164-165) continues by listing several reasons why SEA should be applied. He argues that it should be used to provide input on environmental and sustainability

issues to decision-making and planning while also assessing cumulative impacts and to identify sustainability indicators. According to International Association for Impact Assessment (IAIA):

“SEA informs planners, decision-makers, and affected public on the sustainability of strategic decisions, facilitates the search for the best alternative and ensures a democratic decision-making process. This enhances the credibility of decisions and leads to more cost- and time-effective EA at the project level”.

IAIA (2002)

Retief (2007:87) continues by stating that SEA is a flexible process, which is adaptable to the planning and sectoral development cycle. It is a process which is strategic, and which begins with conceptualisation of the PPP. SEA is a participatory process set within the context of alternative scenarios and can be defined within the wider context of environmental processes and includes the concepts of precaution and continuous improvement. SEA’s role is often related to sustainability objectives because it contributes significantly towards more sustainable policy design and decision-making. This is further exacerbated through the holistic problem-solving and integration characteristics.

Good SEA should take into account the distributional consequences of PPP. SEA procedures cannot be debated in isolation from questions of value, and SEA should not be focused solely on the quality of outcome but rather on the quality of process and outcome (Connelly and Richardson, 2004: 391-393). From this it is evident that SEA is a valuable tool that can be used alongside other tools, including EIA, to aid effective decision-making while contributing towards what Burns et al. (2006) calls sustainability science and SD.

2.6.2.2. Sustainability Assessments

SEA’s and sustainability assessments would go a long way in moving a community towards sustainability while alleviating many of the prevalent issues faced by the people and the community. The use of other, more context-specific complimentary tools will certainly improve available knowledge and create a more holistic picture for planners and decision-makers.

Sustainability is ultimately about people, and their health is a major issue in informal settlements. Health impact assessments and social impact assessments would be a valuable

assessment tool for decision-makers with the aim of promoting SD. These assessments determine what the impact of a proposed development would have on the social structure and the health of individuals within the community. These assessments can also be applied, for example in the case of Kayamandi, to determine what the current issues of health in the area are, as well as what are the factors contributing to bad health and a dysfunctional social structure. From this valuable knowledge can be gained for planners and decision-makers from which a course of action can be developed to try and overcome issues and ultimately ensure a healthy and liveable community.

Bond, Morrison-Saunders and Pope (2012: 53) define a sustainability assessment as a process that directs decision-making towards sustainability; this tool has been referred to as the third generation of assessment tools after EIA's and SEA's. One key difference between sustainability assessments and SEA is that the former can be equally applied to projects as well as strategic decision-making, and has been advocated due to the many shortcomings of other assessment tools such as EIA's and the cost-benefit analysis (CBA). The minimisation of negative effects is not enough; assessment should aim to encourage positive steps towards greater community and ecological sustainability.

The same authors also list some the key strengths and weaknesses associated with sustainability assessment practice (2012:59). The assessment is currently designed to fit into the relevant decision context; this acknowledges the importance and context of pluralism that is a major strength. Furthermore, this assessment promises more direct, efficient and affective attention to interacting ecological, social and economic factors, as well as the longer term legacies of inter- and intra-generational equity. The normative aspects surrounding the assessment as well as the extended time-frames needed to complete one has been criticised, but not convincingly enough to undermine the success and the opportunity that this tool contains.

2.7. Informal Settlement Development and Upgrading

An important dimension in sustainable development, especially with regards to the South African context, is governmental informal settlement upgrading and development programs and initiatives. Informal settlement upgrading is a key component in how the new political dispensation has tried to rectify previous injustices and in how it has tried to develop deprived areas. Housing policy is a key component here, and is important to take note of it

due to the fact that housing delivery is a part of the municipality's agenda. Keeping Kayamandi in mind, it is important to shed light on the different paradigms surrounding informal settlement upgrading and housing delivery schemes, and how these can be incorporated in conjunction with other developmental initiatives such as LED, grass roots development and those projects and organisations which are already functioning and promoting development in Kayamandi.

Theorists and practitioners have developed a variety of informal settlement upgrading theories and paradigms. Each of which has its own positives and negatives. Overwhelming evidence supports the notion of slum or informal settlement development. Well-administered redevelopment can have significant benefits for society as a whole, but more importantly it has significant linkages to the improved socio-economic wellbeing of the urban poor. It also helps combat poverty and vulnerability, achieving sustainable human development, while promoting environmental sustainability (Ziblim, 2013: 5). The benefits for informal settlements and society as a whole are thus very clear, but still remains a difficult and daunting task to accomplish. Several approaches to informal settlement upgrading do exist and each has their own challenges as well as strengths.

In situ-upgrading can be defined as the upgrading or redevelopment of an informal settlement or community with minimal relocations whilst leaving as many residents as possible on site. It requires extensive social engagement, and is extremely time consuming. This type of upgrading has become increasingly complex over time. In situ-upgrading is a complex and difficult process, and thus is often neglected in favour of other more traditional and less complex approaches such as green-fields development and relocations (Misselhorn, 2008: 10).

Several factors guide the success of spatial development. Spatial development would be more sustainable if:

- a politically stable municipal council develops a cohesive and integrated vision for the town's sustainable spatial development alongside other key stakeholders;
- if the informal upgrading process works with the capacities and energies of the urban poor in an incremental and integrated manner;
- farm workers have better access to information as well as better legal representation;

- if available green-and brownfield land are developed in ways that facilitate social integration, sustainable resource use, skills development and job creation, and;
- If growth is reconciled with long-term resource constraints (Nicks, 2012: 23).

However, a major issue that planners need to consider concerning housing delivery projects and green fields development is that these new housing developments are often further away from economic activity. Informal settlements are better located than proposed housing developments, thus relocation makes little sense to residents (Tshikotshi, 2009: 2).

When considering informal settlements and housing structures, the environment and the larger community play a role in whether or not people are satisfied with their residence and residential environment. In this context, the environment extends beyond the physical factors, namely the house, the housing development and the community, to also include social and economic factors. Social factors (social environment, social characteristics of the community, density and the access to private outdoor areas) and economic factors (income and socio-economic background of residents) can increase or improve satisfaction levels of housing residents. Previous studies suggest that residential satisfaction is affected by objective variables such as the housing and environmental conditions. Housing and environmental conditions include the quality of the neighbourhood, social environment, physical environment, quality of and access to community services, and the quality of the residence, home ownership and location of the residential environment (Shen, Ochoa, Shah and Zhang, 2011: 45). Environmental characteristics alongside social and organisational aspects contribute to residential satisfaction and a healthy community. Characteristics like social interaction among occupants, children's play areas and activities provided for teenagers, participation of occupants in activities such as tenant meetings, different organisations for the community, and formal and informal social gatherings of residents, make a tangible difference in the everyday lives of the people and their community.

2.8. Good Governance

Multiple theorists argue that good governance is imperative to the prolonged success of policies and plans related to SD. This section will briefly unpack the concept and themes surrounding good governance and why it is so important to the ultimate success of sustainable development. The elements of good governance will be examined and a used to

show how these elements can be incorporated into the traditional methods of governance that have proven unsuccessful for the government in South Africa.

2.8.1 What is good governance?

Governance can be shortly defined as government's ability to steer itself. It includes the notion of movement (evolution through time) and societal difference. Good governance consists out of complex relationships between the private sector, public sector and civil society. These three sectors are in constructive tension with one another with governance being the manifestation of the equilibrium between them (Hubbard, 1999: 39). Huge (2010: 3) develops this idea by stating that good governance refers to changes in policy-making that aim to strengthen civil participation in decision-making processes and foster partnerships between administration and civil society

Governance in the context of SD is closely linked to environmental governance. It calls for:

- Government to be responsible and accountable;
- Regulations that should be enforced;
- Integrating mechanisms and structures that facilitate participation which should be implemented;
- Inter-ministerial and inter-departmental coordination;
- Access to information, and;
- Institutional and community capacity building (DEAT, 2007b: 54).

A key theme surrounding good governance is the decentralisation of the state and the sharing of responsibilities with regards to resource management. It places emphasis on greater stakeholder engagement and calls for stakeholders to take control and empower themselves. Governance implies that the government does not make decisions for communities but rather allows communities to be part of the planning process (Ndeke, 2011: 17). What good governance contributes towards is the improved communication and understanding between different stakeholders about common issues affecting them and ways to resolve the issues.

Rogers, Jalal and Boyd (2005: 62) argue that good governance is an integral part of avoiding market and policy failures alongside the promotion of SD. They posit that good governance rests on four key principles: Accountability; Participation and Decentralisation;

Transparency; and Predictability. This implies that officials and public servants should be held accountable and responsible for their decisions and actions. All of the beneficiaries of development should be involved and should have a stake in improving their own lives. Laws, regulations and policies should be fair and consistently applied. A government that is transparent shares information regarding government actions and policies before and after an action. This information should thus be made readily available and accessible to all.

The importance of good governance is signalled and highlighted in historical failures of traditional methods of governance. Good governance is essential in maintaining a functioning and healthy democracy and ensuring societal development. As witnessed throughout recent history, it is evident that traditional mechanisms of governance, which are similar to hierarchical and highly centralised versions of government and governance, tend to be flawed and seldom deliver positive progress towards prescribed objectives. The success of good governance lies in the fact that decisions are made by the people for the people. For a sustainable future in South Africa to be a reality, good governance may perhaps be the most salient requirement.

2.8.2 Elements of good governance

The improved incorporation of the masses into decision making can be manifested in numerous ways. These mechanisms of improved partnerships between the public and the governing body for the purpose of improving governance so that it reflects the voice of the citizens are here referred to as elements of good governance.

2.8.2.1. Co-Management

Whilst co-management is usually a concept associated with the management of conservation areas and natural resources, it can also be applied to the management of developmental initiatives and is widely regarded as a vehicle for social change. Making co-management work at the local level requires policy and national legislation to create an enabling environment where the co-management of resources and development can flourish.

The ideological foundation surrounding the concept is one that places people unambiguously at the centre of the development process, but also engages with and incorporates the opinion of civil society, the market and the state. The strength and importance of co-management lies

in its ability to increase accountability within organisations, how it accommodates and fuels local capacity building, whilst facilitating decentralisation and democratisation at the national level (Borrini-Feyerabend et al., 2004: 342-343). Co-management has the ability to give stakeholders a sense of ownership, thus facilitating empowerment. Crucially, it has the capacity to influence existing policy whilst placing other important issues on the policy agenda.

2.8.2.2. Participation and engagement

From policy design to decision-making and implementation, participation for results has become central to successfully implementing internationally agreed upon SD commitments. Imperative to participation of non-state actors is governance through networks rather than traditional hierarchical structures. Governing by network relies on the ability to leverage cross-sector partnerships to implement innovative funding and management relationships. The participation of key interest groups creates a shared responsibility, improved transparency and accountability whilst better targeting services to community needs that create lasting public value (Kupcu, 2005: 90-93). The digital age has long ago provided the means for this kind of communal discussion, participation and contribution, and should be more effectively implemented.

The success of this lies, however, in differentiating between a participative and representative democracy with emphasis placed on the former. Fostering a participative democracy relies on the creation of multi-stakeholder dialogues (MSD's), global public policy networks and partnerships. MSD's have gained momentum as they are an innovative way of incorporating stakeholders into decision-making, including formal consultations, thematic panel presentations, working groups, high level discussions and side events. MSD's do require a high level of political will, time and significant financial resources to ensure success. Public-private partnerships have gained significant prominence as way of mobilising resources for sustainable development and are valuable in ensuring resources and knowledge is shared between change agents and stakeholders. (Kupcu, 2005: 93-96)

2.8.2.3. Policy design and implementation

Crucial towards good governance is good policy design and effective policy implementation. Policies have to be designed, so that they can facilitate co-management whilst ensuring policy

objectives are met in the long term. Policy implies a purposeful course of action taken by social actors to address particular issues and advance towards specific objectives. It involves processes in the form of policy making, implementation and review. It involves content in the form of objectives, statements and instruments.

South Africa's policy development process can be encapsulated into four broad stages: The identification of a broad goal; the selection of the means through which to achieve this goal; the identification of appropriate measures or instruments to ensure that the strategy works and; monitoring and evaluation of the effectiveness of both the strategy and the policy instruments in achieving the goals (Clark, Willis and Brown, 2000). For co-management to succeed, policy frameworks at national level should be products of internally driven participatory processes that generate broad-based commitment and ownership. These arrangements are best established in a political context that respects basic freedoms and provides for rule of law (Borrini-Feyerabend et al, 2004a:343-345).

If policy is to be of any value, it must genuinely make a difference to the way in which it benefits the relevant sectors of society. In many cases, policies have been developed without a clear understanding of the implications associated with the implementation of that policy. Clark, Willis and Brown (2000) list several reasons why policy implementation is often poor. Lacking a clear strategy to guide implementation, lacking legislation to provide incentives or punitive measures to enforce policy, lacking capacity and lacking buy-in can all derail the original intent of the policy.

For implementation of environmental policy to become good and effective, attention has to be given to several key issues: Institutional capacity has to be significantly improved; co-ordination between sectors, actors and spheres of government has to improve dramatically (Peart and Wilson, 1998: 262-264). In many cases, especially in South Africa, on paper a certain policy seems good, but the success of policy is dependent on the continuous successful implementation of policy. This is a major problem in South Africa.

2.8.2.4. Incentives and regulation

For policy to be successful the affected people need to understand the policy objectives. Furthermore, people should be given an incentive to adhere to and personally implement policy on a day-to-day basis. The success of policy is also determined by successful implementation, compliance and effective monitoring and evaluation. The regulation and

enforcement of policy is equally as important and appropriate incentives and punitive measures need to be in place for policy to succeed.

Government can implement regulatory and enforcement measures to incentivise or disincentivise people to respond to policy. Regulation punishes transgressors, while economic instruments provide an economic incentive to improve environmental performance, and voluntary approaches rely on education, persuasion and negotiation. Measures include green taxes, fines, tradable permits and quotas etc. (Jordan, Rudiger and Zito, 2005: 486-490). All of these measures help people to respond effectively to policy and help policies to achieve intended objectives. It is however better to use a combination of these three instruments as it will most likely yield better results than if one of these instruments were to be used in isolation.

Judgements about which combination of these instruments to use can be made through five criteria: effectiveness, motivation, administrative cost, efficiency and political acceptability. These criteria enable officials to decide which policy instrument or combination of instruments would be most effective and successful. These instruments act as a positive reinforcement for individuals and communities alike, and often lead to greater beneficial impact from policies (Connelly and Smith, 2003: 158-173).

Good governance can be defined as governance that is responsible and accountable, where regulations are strictly enforced. Integrating mechanisms and structures that facilitate participation should be developed and implemented. There needs to be inter-ministerial and inter-departmental coordination. The institutional responsibilities for regulating environmental impacts and promoting resource exploitation should be kept separate. Access to information should be freely available to people. And there needs to be institutional and community capacity building (DEAT, 2007b: 54).

2.8.2.5. How can good governance be achieved?

Clearly the notion of good governance seems to be theoretically attractive, but in reality the task of changing the traditional foundations of governance is a daunting one. In order for local, provincial or national government to move towards this attractive and efficient version of governance, several characteristics need to be adopted:

- The involvement of active political bodies and civil society pressure groups;
- A reliable and fair judicial system;

- Clarity with regards to roles and responsibilities;
- An appropriate vision, purpose and set of strategies; integrity and accountability, and;
- Effective stakeholder engagement.

The respect of human rights together with the enforcement of legal claims and the facilitation of effective access to administrative and judicial proceedings should be used for the promotion of open access to information, transparency and accountability.

2.8.3. The outcomes of good governance

Good governance enables a wide variety of positive changes to be enforced; Ndeke (2011: 17) suggests that sustainable governance outcomes include the following features:

- Representivity and equity in resource control and allocation;
- Developmental and growth focus;
- Participatory, responsive, people-centred strategies;
- Democratic rights, stability, legitimacy and transparency of processes;
- Political and financial accountability;
- Professionalism and ethical behaviour;
- Flexible, effective, efficient and affordable processes;
- Co-ordination, integration and holism of services;
- Creative, competitive and entrepreneurial practices;
- Literate, educated, participating and empowered citizens resulting from a healthier community.

The reality of this is that an enabling environment for sustainable development is created whereby resources can be efficiently managed and allocated and climate mitigation can become more responsive. As said earlier in this chapter, the triple bottom line of sustainable development is connected by good governance.

2.9. Conclusion

The aim of this literature review was to critically analyse the concepts surrounding SD and its three pillars alongside what is required in order to achieve SD. Additionally, this chapter has shed light on poverty and the nature of informal settlements as well as on the current

environmental and socio-economic issues which tend to be ubiquitous with informal settlements. Finally, the monitoring and evaluation of SD was deliberated in order to give perspective on how SD can be measured with regards to the intended objectives stipulated in PPP.

This chapter then serves as a theoretical launch pad from which we can critically analyse the current situation in Kayamandi and by which sustainable development in informal settlements can be promoted. Unpacking the concepts surrounding sustainable development, developmental initiatives and good governance has enabled us to gain a better understanding about how to approach SD in Kayamandi. From here further investigation can be conducted on the various case studies which are discussed in the following chapters.

Chapter 3: Policy, Plans and Programs

3.1. Introduction

After being the outcast of the global economy and community, after 1994, with the new political dispensation, South Africa has become a member of many bi-lateral, multi-lateral and international agreements. These include the United Nations, the African Union, and the British Commonwealth, to name but a few (Dixon and Pretorius, 2001: 12). These international agreements, alongside national policy and legal frameworks, serve as a backbone through which decisions surrounding development, resource distribution and use in the country are made. The new democracy has witnessed a huge shift in priorities and policy objectives. This has been reflected in the new Constitution and several new policies, plans and programs.

Sustainable development is central in national government's planning for the future, and has been for some time. For example, some of the key strategies listed within The Cape Town Spatial Development Framework (2012: 39, 52, 69) are to build a vibrant, integrated and inclusive city, balance urban growth and environmental protection, and improve economic growth and opportunities. Furthermore, SD objectives are identifiable in many of the national, provincial and municipal government policy documents. IDP's and spatial development frameworks all focus to some extent, on SD. However, even though this is the case, sustainable development has made few inroads into South Africa and nowhere is this more apparent than in informal settlements.

This chapter will unpack and dissect many of the policies, plans, programs and legal frameworks associated with informal settlements and sustainable development. More importantly, it will do so with a focus on the issues which contributing to the current development climate in Kayamandi. The aim is to provide some context and shed some light on what the South African government's agenda is with regards to SD and how this fits into the policies and legal frameworks.

3.2. The South African Constitution

South Africa's Constitution is the result of remarkably detailed and inclusive negotiations that were carried out with an acute awareness of the injustices of the country's non-democratic and racially segregated past (Tshikotshi, 2009: 41). It is the highest law of the nation and no

other law or government action can supersede it. This document is the fundamental and supreme law of South Africa and provides the legal foundation for the existence of the republic. In this document, the bill of rights, the duties of citizenry are set out as well as the relationships between various government structures (Henrard, 2002: 24-29). This section will highlight some key aspects of the constitution and bill of rights which are significant with regards to environmental justice, sustainable development and the research at hand.

In the preamble of the Constitution (1996: 1243) it states that we as the people of South Africa have recognised the injustices of the past, and from this there is the common belief that South Africa belongs to all who live in it and that we should be united in our diversity. Through the democratically elected representatives, this Constitution is adopted as the supreme law of the country to rectify past injustices and divisions so that a society can be established based on democratic values, social justice and fundamental human rights.

The preamble signifies the transition from the old to the new and epitomises the new political dispensation's focus on justice and the undoing of the infamous apartheid legacy. It encapsulates the desire to preserve the diversity of its people whilst remaining unified and equal. Democracy and an active citizenry is the core of what the Constitution described and envisions for the future of this sovereign state. An informal settlement such as Kayamandi is a realistic representation of the failures of the past, both before and after 1994. But it can also be seen as an opportunity for the Constitution can change the realities of its inhabitants. In protecting the human rights of people of Kayamandi and the rest of the nation, a sustainable society and future can also be assured.

Section 3: Equality

Each citizen of the republic is equal before the law and has equal protection and benefit of the law. No person, or the state for that matter, may discriminate directly or indirectly against any person on any ground including: race, gender, sex, pregnancy, marital status, disability, ethnic or social origin, religion, culture, language or belief (The South African Constitution, 1996: 1247).

Section 24: Environment

Everyone is entitled within their rights to an environment that is not detrimental to their well-being or health and to have the environment protected via reasonable and appropriate

legislative measures for the benefit of future generations. Legislative measures should prevent and possibly reduce pollution and environmental degradation, whilst securing sustainable development (The South African Constitution, 1996: 1251-1252).

Section 26: Housing

Housing is recognised as a basic and essential need, imperative for the wellbeing of humans. Each South African has the right to have access to adequate housing. Government should fulfil this need through reasonable and appropriate legislative measures within the state's available resources, while ensuring that no citizens are wrongfully removed or evicted from their homes, or have their dwellings demolished without appropriate and reasonable permission from government (The South African Constitution, 1996: 1254).

Section 27: Healthcare, food and social security

Each South African has the right to have access to sufficient food and water; healthcare services, including maternal care and no South African may be refused emergency medical treatment. If a citizen cannot support themselves or their dependants they are entitled to social security grants such as disability grants, child support grants etc. (The South African Constitution, 1996: 1254).

Section 32: Access to information

Government may not withhold any information from the citizenry and each citizen has the right of access to information held by the state or by any individual that is required for the protection of any rights stipulated in the Bill of Rights. Legislation must be enacted and should provide reasonable measures to give effect to this right and to alleviate the administrative and financial burden on the state (The South African Constitution, 1996: 1257).

The rationale for identifying and highlighting sections 3, 24, 26, 27 and 32 in the Constitution of South Africa is because of their significance to the research, but also because these are some the most basic human rights which are most commonly infringed in informal settlements. It is the presidency's promise to its citizenry that all of the rights in the Bill of Rights will be protected. This however, is not always the case. By identifying which of these rights are being infringed, we can critically analyse where government has to improve the enforcement of these rights at national, provincial and municipal levels. Also, these rights are

in close relation with what sustainable development stands for. By implementing and enforcing the constitution we are moving closer to what can be deemed as good governance and ultimately sustainable development which will benefit the entire South African citizenry.

3.3. National Environmental Management Act (NEMA)

NEMA is South Africa's guiding document concerning all things environmental. The act makes provisions for the management of the environment, its resources and human interactions with it. The document allows for and places emphasis on the role of institutions in ensuring good environmental management is promoted. Procedures for cooperative governance, fair decision-making and conflict management are also highlighted within the document. Integrated environmental management is central to the act's guiding principles, and thus is the key theme running through the document. The Act also highlights the importance of international obligations and agreements as well as the enforcement and compliance with environmental policy.

Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably (National Environmental Management Act, 1998: 14). This is the ethical as well as theoretical point of departure for the Act. Due the importance of NEMA as a guiding document through which environmental and developmental decision-making takes place, some of the key principles that are applicable to informal settlement development will be underlined.

The principles set out in the Act apply throughout the Republic to the actions of all organs of state that may significantly affect the environment. It is the state's responsibility to respect, promote and fulfil the socio-economic rights as stipulated in Chapter 2 of the Constitution. These same principles also serve as general framework within which environmental management plans must be formulated and implemented. They also act as a guideline with regards to the interpretation, administration and implementation of this Act, as well as any other legislation associated or concerned with the management and conservation of the environment. Environmental management should effectively place people and their needs at the centre of its concern, while serving their social and developmental interests. However,

development must be socially, economically and environmentally sustainable (National Environmental Management Act, 1998: 14-15).

The Act emphasises that sustainable development requires that the disturbance of ecosystems and biodiversity loss should ideally be avoided, and at the very least, reduced. Actions that pollute or degrade the environment should be avoided or minimised. The same is applicable for the disturbance of landscapes, or sites which preserve the nation's cultural heritage, the creation or disposal of waste, and also other activities which have detrimental effects on the environment or infringe on people's environmental rights (National Environmental Management Act, 1998: 15).

NEMA further stipulates that the management of the environment should be integrated, and acknowledges that all the elements of the environment are interrelated. Emphasis is placed on the pursuit of environmental justice and the notion that negative environmental impacts should not be distributed in such a way as to discriminate or infringe on any individuals rights. Special attention in management and planning should be given to highly dynamic, stressed, vulnerable or sensitive ecosystems, such as coastal shores, wetlands and estuaries, especially if they are subject to significant development pressure or human resource usage.

Environmental resources should be equitably accessible, and the benefits and services thereof that fulfil basic human needs and promote wellbeing should be pursued while ensuring that previously disadvantaged individuals have access to these goods and services. The participation of communities and affected parties in governance should be promoted. Everybody must have the opportunity to develop an understanding and the necessary skills and capacity in order to achieve effective and equitable participation. The interests, needs and values of all affected or interested parties as well as traditional knowledge should be taken into account in decision-making. Environmental education should be of the nature that it must promote the wellbeing and empowerment of communities. Decision-making should be transparent and open, and the access to information must be provided in accordance to Section 32 of the Constitution. The harmonisation of policies and legislature as well as intergovernmental coordination is of the utmost importance. Finally, the role of women and youth in environmental management should not only be recognised, but also promoted (National Environmental Management Act, 1998: 15-17).

NEMA is relevant to Kayamandi because it embodies the integrated environmental management discussion. Integrated environmental management is equally as much about people as it is about the environment. In Kayamandi, residents live in close proximity to the natural environment, but certain aspects of the environment are detrimental to their health, such as the Plankenburg River. This is in direct opposition to Section 24 of the constitution. Thus, Kayamandi requires integrated environmental management to address not only the environmental issues, but the social and the economic issues as well. Furthermore, NEMA is relevant to the research due to thesis embodying the notion in which sustainable and resilient human settlements can be regarded as product of effective integrated environmental management. “Integrated” is fundamental here, as it exemplifies the fact that integrated environmental management can be achieved by targeting management initiatives at the right places or people. This effectively means that integrated environmental management and therefore sustainable development can be achieved through good governance and the development of leaders within management structures and communities.

3.4. Environment Conservation Act

South Africa is well known for its pristine beauty and natural biodiversity. The aim of the Environment Conservation Act is therefore to ensure that reasonable measures are taken to promote and protect the country’s biodiversity and natural resources. It makes provisions for the prohibition of littering, removal of litter, activities that might have a detrimental effect on the environment etc. in order to reduce environmental degradation.

Prohibition of littering

In the section on littering, the legislature prohibits any person from discarding, dumping or leaving any litter on any land or water surface, street, road, site or any area to which the public has access, except if it is in a container or at a place which has been specifically and appropriately demarcated as landfill site. Every person or authority that controls the maintenance of a place which the public has access to, is responsible and must ensure that containers or places are provided which would normally be adequate and suitable for the discarding of litter by the public. However, it also remains the responsibility of the person to ensure that litter is removed within a reasonable time (Environment Conservation Act, 1989: 8).

Identification of activities which will probably have detrimental effect on environment

The Minister may identify and notify the public via the Gazette as to those activities that the appropriate authority or experts may deem to have substantial detrimental effects on the environment. The activities may include, but are not limited to the following categories: *“Land use and transformation; Water use and disposal; Resource removal, including natural living resources; Resource renewal; Agricultural processes; Industrial processes; Transportation; Energy generation and distribution; Waste and sewage disposal; Chemical treatment and; Recreation”* (Environment Conservation Act, 1989: 9).

The Conservation act is relevant to the case study at hand due to Kayamandi being in close proximity to critical biodiversity areas and water bodies such as the Plankenburg River. It is of significant importance to rehabilitate and conserve the surrounding natural areas for the benefit of current and future generations.

3.5. Land Tenure Act

The South African Constitution makes call for a society based on democratic values, social justice and fundamental human rights and seeks to create an environment where individuals and communities can flourish with an improved quality of life. The magnitude of informal settlements in South Africa and the pressing issue of land tenure in relation to slum growth has placed emphasis on the need for the right to tenure and implementing the Land Tenure Act effectively (Smit and Abrahams, 2010: 7). The Land Tenure Act (1997) aims to address and assist the many South Africans who do not have secure tenure of their homes and the land on which they stay. This has given rise to multiple unfair evictions of workers and inhabitants on farms. This has also been a widespread occurrence in and around Stellenbosch and has severely fuelled informal settlement growth and the transient nature of its townships.

Unfair evictions lead to great hardship, conflict and social instability. These evictions are in part a result of discriminatory laws and practices of the past. In essence the law aims to promote the achievement of long-term security of tenure for occupiers of land, where possible through the joint efforts of occupiers, land owners and government bodies.

The objects of the Act are:

- (a) To promote and protect the relative rights of persons working on farms, persons residing on farms, and farm owners;
- (b) To enhance the security of tenure of persons residing on farms;

- (c) To create conditions conducive to peaceful and harmonious relationships on farms and in farming communities; and
- (d) To sustain production discipline on land in the interest of food security.

The law extends the right of occupiers, while giving due recognition to the rights, duties and legitimate interests of owners. The law should regulate the eviction of vulnerable occupiers from land in a fair manner while recognising the right of land owners to apply for a court eviction order in appropriate circumstance to ensure that occupiers are not further prejudiced (Land Tenure Act, 1997: 10).

Application and implementation of Act

In Section 2 of the Act it states: the Act shall apply to all land other than land in township established. This includes any land within a township that has been designated for agricultural purposes as well as land within such a township which has been established, proclaimed and approved in respect only of a person who was an occupier immediately prior to such establishment, approval, proclamation or recognition (Land Tenure Act, 1997: 6).

Consent to reside on land

Permission for a tenant to reside on or use land may only be terminated in accordance with Section 8 of the Act. The withdrawal of consent to reside on land will be deemed to be a valid termination of the right of residence in terms of Section 8, provided that it was just and equitable. Consent for a person to reside on land shall be effective regardless of whether the occupier, owner or person in charge has to obtain some other official authority required by law for such residence. A person, who has openly and continuously resided on land for a year, shall be presumed to have consent unless the contrary is proven, and if a person has done so for a period longer than 3 years, shall be deemed to have done so with the knowledge of the owner or person in charge. However, the above mentioned shall not be applicable to any land held by or registered in the name of the state or any institution or functionary exercise on behalf of the state (Land Tenure Act, 1997: 6).

Measures to facilitate long-term security of tenure for occupiers

The minister or government must facilitate tenure security from finances allocated by parliament for that purpose and subject. However, the minister may prescribe, in general or in a particular case, grant subsidies to facilitate the planning and implementation of on- and off-site developments. The minister may also prescribe the terms to enable occupiers who need

long-term security of tenure to acquire land or rights to land; and finally, for the development of land occupied or to be occupied in terms of on- and off-site developments (Land Tenure Act, 1997: 8).

3.6. Housing Act

In section 26 of the constitution (1996: 1254) it is stated that: *“everyone has the right to have access to adequate housing, and the state must take reasonable measures, within its available resources, to achieve the progressive realisation of this right”*. The housing act is government’s means to ensure that this right is fulfilled. The act describes housing as adequate shelter, which fulfils a basic need. This is a key sector of the national economy, is vital to the socio-economic well-being of the country and is a vital part of integrated development planning (Housing Act, 1997: 7). This section will briefly disseminate the most important aspects of the act in relation to informal settlements and the research at hand.

In the general principles section (1997: 5-7) of the act it is stipulated that all spheres of government must give precedence to the needs of the poor or previously disadvantaged in respect to housing development. Development of housing should be preceded by meaningful consultation with communities as well as individuals. Housing development should be provided with as wide a selection of tenure and housing options as reasonably possible. Housing development should nonetheless be economically and socially sustainable and affordable, while being based on integrating development planning. Housing development should be administered in a transparent, accountable and equitable manner, and should uphold the practice of good governance. It remains imperative that government encourage and support communities, co-operatives and associations which are community based in their efforts to satisfy their own housing needs by providing the necessary assistance with regards to accessing land, services and technical support in a way that leads to the transfer of skills as well as the empowerment of the community.

Furthermore, government should stimulate and endorse the establishment, development and maintenance of socially and economically viable communities and ensure safe and healthy living conditions to safeguard the further development of slums and slum conditions. The social, economic, racial and physical integration in urban and rural spaces should be stimulated, while providing community and recreational facilities in residential areas. Crucially, the impacts of housing developments on the environment should be noted and

minimised, while preserving the expression of cultural identity and diversity in such developments (Housing Act, 1997: 7).

It is clear from the abovementioned principles taken out of the act that government's housing schemes and programmes should be focussed on the poor and the previously marginalised. These housing schemes have to be undertaken alongside rigorous participation with the involved individuals and communities. If one takes into account all of the principles listed in the document it is clear that it aims to conform to the triple-bottom line of sustainable development. However, Tshikotshi (2009: 50) argues that there still remain many critiques with regards to housing delivery in this country. These include: poor location of housing developments; poor quality of the houses built; lack of effective assistance in maintaining housing stock, and; the failure of housing delivery to address the housing backlog.

3.7. Breaking New Ground

Breaking New Ground is a comprehensive plan for housing delivery which focuses on stabilising and transforming the extremely fragmented, complex and racially biased financial and institutional framework synonymous with the apartheid government (Breaking New Ground, 2004: 7). The persistence of various problems as well as the continual growth of informal settlements, despite subsidised government housing delivery since 1994, has led to the development of an informal settlement upgrading program with a dedicated subsidy mechanism. This mechanism is part of a larger refinement of the national housing policy which forms part of the Breaking New Ground document. The aim of this document is to build a comprehensive plan for the development of sustainable human settlements (Huchzermeyer and Kalam, 2006: 41).

This new housing vision aims to accelerate housing delivery, utilise the provision of housing as a major employment generator, leverage growth in the economy, combat crime while promoting social cohesion and utilising housing as an instrument for the development of sustainable human settlements (Breaking New Ground, 2004: 12). The plan proposes to achieve these objectives via the following instruments:

- Expanding the scope of the housing mandate;
- Shifting from product uniformity to demand responsiveness;
- Enhancing the role of the private sector;

- The provision of housing finance and;
- Creating linkages between the primary and secondary residential property market (Trusler, 2009: 31-32).

A key theme of the plan is not merely the provision of housing, but rather ensuring that sustainable human settlements are established. This calls for:

- Progressive informal settlement eradication;
- Promoting densification and integration;
- Enhancing the location of new housing projects;
- Developing economic and social infrastructure and;
- Enhancing the housing product Breaking New Ground (2004: 12-16).

Analysing the Breaking New Ground plan is important to the research at hand, as it enables us to gain insight into how government seeks to provide housing and address the housing deficit. The backlog and housing delivery as well as the transformation of informal settlements into sustainable entities is a daunting challenge, but the aim of this plan is to overcome the myriad challenges associated with informal settlements eradication. A further analysis of the success of these plans will be made later in this thesis, whereby we can examine the challenges associated with these plans in order to gain a better understanding of how to more effectively implement these plans and strategies to promote sustainable development.

3.8. Agenda 21

Agenda 21 tries to address the pressing problems of today, while simultaneously preparing the world for the challenges of the next century and beyond. It reflects a global consensus and political commitment at the highest level on the cooperation between the environment and development. EnviroWorks (2006: 17) defines Agenda 21 as a participatory multi-sectorial process in which the goals can be achieved at the local level through preparation and implementation of a long-term strategic action plan that addresses and prioritises local sustainable development concerns. The success of the implementation rests on governmental capacity and policy plans and documents, with international cooperation supporting such national efforts. Furthermore, the objectives of Agenda 21 will require a continual substantial flow of new and additional financial resources in order to cover the incremental costs surrounding the acceleration of sustainable development (Agenda 21, 1992).

On a practical level, Agenda 21 is a sustainable development action plan which represents international consensus on developmental, social and environmental issues. The blueprint outlines actions that government, international organisations, industries and communities can take in order to promote sustainability. The plan was adopted at the United Nations Conference on Environment and Development (UNCED) summit meeting on the 14th of June 1992 with the objective of alleviating poverty, hunger, sickness and environmental issues. Subsequently Agenda 21 is divided into four sections with the aim of addressing these concerns.

- **Social and Economic Dimensions**

The plan seeks to address these issues by examining the underlying human factors and problems of development, along with the key issues of trade and integrated decision-making. The plan places specific emphasis on combating poverty, changing consumption patterns, demographic dynamics and sustainability, protecting and promoting human health conditions, promoting sustainable human settlement development, and integrating environment and development in decision-making (Agenda 21, 1992: 13-17).

- **Conservation and Management of Resources Development**

The plan emphasises the need to reduce environmental degradation and reversing the detrimental human impacts on the environment. Agenda 21 highlights several key points in relation to conservation and the management of resources including: combating deforestation, managing fragile ecosystems, promoting sustainable agriculture, the conservation of biological diversity etc. A key theme of the plan is the necessity of integrating the environment into decision-making (Agenda 21, 1992: 85-91).

- **Strengthening the Role of Major Groups**

This section looks at the social partnerships necessary if sustainable development is to be a reality. It recognises that government and international agencies cannot alone achieve sustainable development and that the community, through representative and industry organisations, must be a key player in the development of policy and in

achieving the necessary changes. The focus here is on incorporating women and children into development and sustainable development, recognising the strength and value of indigenous knowledge and practices, strengthening the role of workers and trade unions, strengthening the role of business and industry and also the fostering of scientific innovation (Agenda 21, 1992: 231-320).

- **Means of Implementation**

Here an examination is made on what resources must be mobilised in support of sustainable futures. While finance and technology are key elements, this section also deals with aspects of education, institutional and legal structures, data and information and the building of national capacity in relevant disciplines. The success of such an ambitious plan ultimately rests upon successful implementation (Agenda 21, 1992: 346-351).

Agenda 21 is an incredibly detailed and comprehensive plan which will not be discussed in greater length here, but the crux of the matter is that it is a blueprint for global sustainable development. Some of the key points were highlighted here because of its relevance towards the research at hand. It addresses many of the issues which informal settlements face and is an example of a global agreement of which South Africa is a signatory. Such agreements form an important contributor to the national legislation and policies needed to start moving towards a sustainable future.

3.9. National Development Plan – Vision for 2030

The national development plan is a guiding document wherein South African development is defined. The document is often also referred to as the vision for 2030. The vision statement of the plan indicates that the elimination of poverty and the reduction of inequality are pivotal in ensuring a better life for all South Africans. The core of this plan rests on capabilities; the capabilities of people and of our country and of creating opportunities for both. This is the conceptual point of departure for the document (The National Development Plan, 2011: 6). The rest of this section will place emphasis on key features surrounding the document and the vision

The plan identifies several challenges that obstruct growth and development; these challenges have to be overcome in order to ensure that the vision becomes a reality (The National Development Plan, 2011: 3). Central challenges include the fact that too few people work; there is poor standard of education for black learners; Infrastructure is poorly located and under-maintained; spatial patterns exclude the poor from development; the economy is resource intensive; a widespread disease burden is compounded by a poor healthcare system; public services are of poor quality; corruption is widespread, and; South Africa remains fundamentally a divided society.

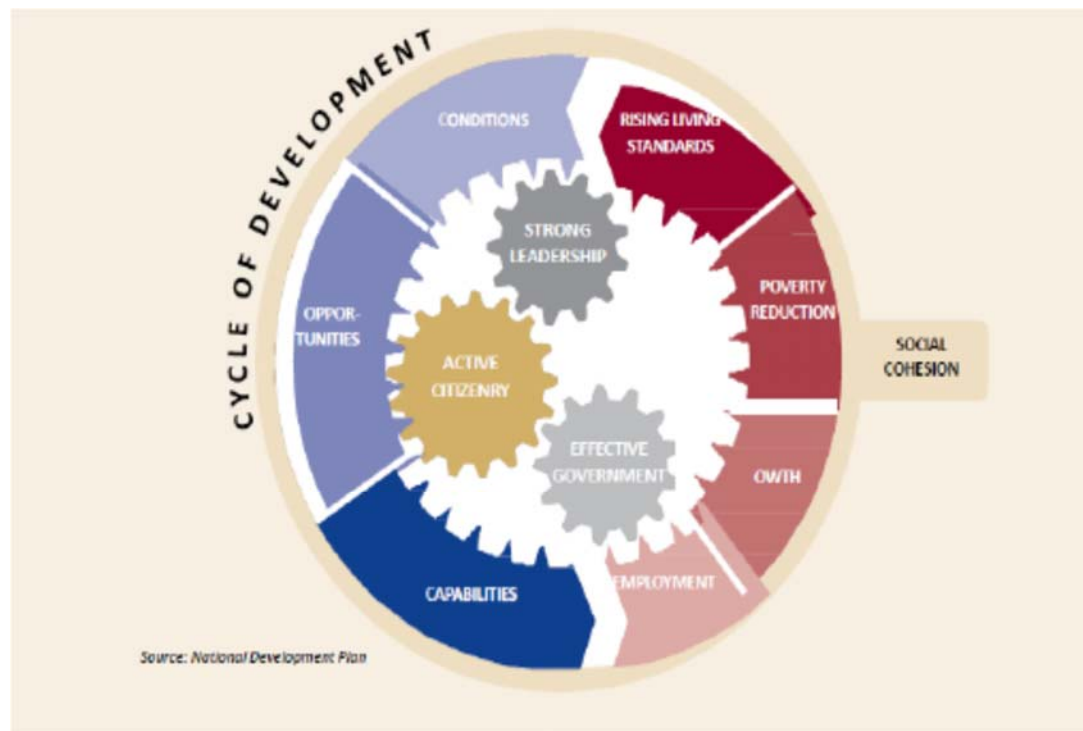


Figure 3.1. Cycle of Development (National development Plan)

The plan includes a long term strategy to increase employment and broaden employment opportunities through education, training, public employment initiatives and programmes. The plan also involves and emphasises the need for the citizenry to actively participate and engage in their development. The plan exacerbates the need for the state to actively support and incentivise citizen engagement. The citizenry should actively seek out opportunities for improvement, knowledge, experience and opportunity. Participation is a necessity for democracy and development, the state has to act with the people and not for the people, the voiceless need to be heard. All sectors of society including the judiciary and legislature have

to ensure that development and the benefits thereof do not exclude the poor and marginalised. The plan continues by proposing a number of interventions for each of these challenges:

Employment and Growth

- Raise exports
- Increase the size and effectiveness of the innovation system
- Improve the functioning of the labour market, so that it can help the economy absorb more labour
- Support small businesses through better coordination of activities
- Improve the skill base through better education
- Increase investment in social and economic infrastructure to lower costs, raise productivity and bring people closer to the mainstream economy
- Reduce the regulatory burden in sectors
- Improve the capacity of the state to effectively implement economic policy

In Chapter 3 of the NDP: *economy and employment*, the plan aims to reduce the cost of living and cost of doing business for poor households through microeconomic reform while developing proposals and standards for a minimum acceptable standard of living. The constraints on growth need to be removed while positioning the country in such a way as to attract foreign investment. The plan also places emphasis on rural communities and the improvement of their socioeconomic wellbeing. The plan aims to activate rural communities via mechanisms of improved infrastructure and service delivery, a review of land tenure and commitments to social and tourism investments. In essence, the plan aims to create a more inclusive and sustainable rural economy, because these communities are often neglected in policy planning and seldom reap the benefits of economic expansion and foreign investments that occur occasionally in urban regions (The National Development Plan, 2011: 12).

Transition to a low-carbon economy

- Support for the carbon budgeting approach, linking social and economic considerations to carbon reduction budgets.
- Introducing an economy-wide price for carbon, complemented by a range of incentives and programs to raise energy efficiency and waste management.

- A target of five million solar water heaters
- Building standards that promote energy efficiency
- Simplifying the regulatory regime to encourage renewable energy.

One of the primary objectives of the plan is building and improving environmental resilience and sustainability.

“The document proposes three measures to protect the country’s natural resources:

- 1. Developments that have serious detrimental environmental impacts need to be offset by support improvements in related fields, supplemented by a comprehensive environmental management framework.*
- 2. Increase the amount of area (land and ocean) which is under protection.*
- 3. Create and use a set of indicators for natural resources accompanied by annual reports on the health of resources to inform policy decisions and processes”*

(The National Development Plan, 2011: 15).

Reversing the spatial effects of apartheid

- Increasing urban population density and improving the liveability of cities.
- Providing more reliable and affordable public transport with better coordination across municipalities and between different modes.
- Moving employment and investment towards dense townships.

Integrating urban nodes, increasing population density and focusing on economic growth will mean that a larger proportion of South African’s population will have access to economic opportunities. Addressing these spatial complexities will have significant spill over effects that will aid sustainable development. For example the integration and densification of urban centres will significantly reduce environmental degradation and the dependency on fossil fuel transport such as busses and mini-bus taxi’s and will also means that economic activity will be closer to informal settlements (The National Development Plan, 2011: 16).

Improving the quality of education, training and innovation

- High-quality childhood education, with access rates exceeding 90%.

- Quality school education, with globally competitive literacy and numeracy standards
- Further and higher education and training that enables people to fulfill their potential.
- An expanding higher education sector that is able to contribute towards rising incomes, higher productivity and the shift to a more knowledge-intensive economy.
- A wider system of innovation that links key public institutions with areas of the economy consistent with our economic priorities.

The quality and accessibility of education in South Africa has been a key concern for government. Many rural areas and informal settlements lack proper educational facilities and the number of people who complete high school and tertiary education is worrisome (The National Development Plan, 2011: 17).

Quality health care for all

- Improved management, especially at the institutional level.
- More and better trained professionals
- Greater discretion over clinical and administrative matters at the facility level, combined with effective accountability.
- Better patient information systems supporting more decentralised and home-based care models,
- A focus on maternal and infant health care.

South Africa has a high infant mortality rate, together with high infection rates of HIV/AIDS and other infectious diseases such as tuberculosis. As a result a large majority of the population is susceptible to infectious disease. The high number of sick people places pressure on the health care system and means that more people need grants and healthcare subsidies from government (The National Development Plan, 2011: 19-20). But sick people also cannot work, or work as productively as healthy people. This has a negative impact on the economy and demonstrates that the knock-on effect of poor health care is far reaching.

Building safer communities

- Strengthening the criminal justice system.
- Making the police service professional.
- Demilitarising the police service.
- Building safety using an integrated approach.
- Building community participation in community safety.

South Africa is infamous for its high rates of violent and non-violent crime. Even more worrisome is the high prevalence of corruption. Corruption reduces the trust in government and ensures that resources (both financial and material) are poorly distributed. Crime and corruption deters potential foreign direct investment that is vital in promoting development and economic growth (The National Development Plan, 2011: 22).

Transforming the society and uniting the country

- Reducing poverty and inequality by broadening opportunity through economic inclusion, education and skills, and specific redress measures.
- Promoting mutual respect, inclusiveness and cohesion by acting on the constitutional imperative that South Africa belongs to all who live in it, and that all are equal before the law.
- Deepening the national appreciation of the responsibilities and obligations that citizens have towards one another.

It is important for the nation's future and for all prospects of potential development that the nation is united in its pursuit of a better future. If the vision for 2030 is to become a reality, then it is essential that everybody reads from the same page and acts together in promoting sustainable development (The National Development Plan, 2011: 25).

3.10. The National Framework for Sustainable Development

In the National Framework for Sustainable Development, the presidency clearly expresses their vision as follows:

“South Africa aspires to be a sustainable, economically prosperous and self-reliant nation state that safeguards its democracy by meeting the fundamental

human needs of its people, by managing its limited ecological resources responsibly for current and future generations, and by advancing efficient and effective integrated planning and governance through national, regional and global collaboration”.

(NFSD, 2008)

The guiding principles of the document are as follows:

- Human dignity and social equity;
- Justice and fairness; democratic governance;
- Efficient and sustainable use of resources;
- The fulfilment of basic human needs;
- Integration and innovation;
- Consultation and participation and;
- Implementation in a phased manner.

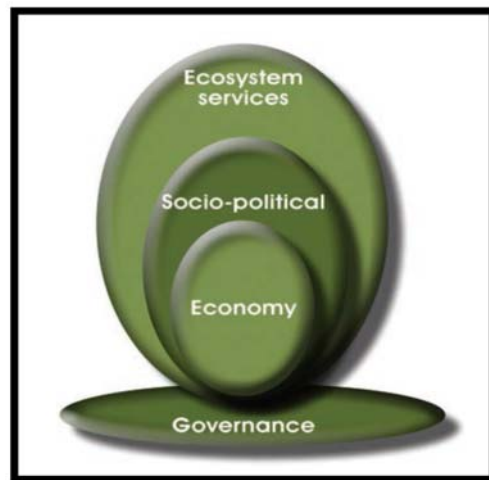


Figure 3.2: The National Strategy for Sustainable Development (2011: 14).

The South African government proceeds to follow a systems approach to sustainable development. Such a system is one where, the socio-political system and the eco-system are embedded within each other, and then integrated through a governance system that glues the other system together in a legitimate regulatory framework (National Strategy for Sustainable development and Action Plan, 2011: 3).

The National Strategy for Sustainable Development and Action Plan (2011: 7) has five strategic objectives:

1. Enhancing systems for integrated planning and implementation;
2. Sustaining our key eco-systems and using our natural resources efficiently;
3. Towards a green economy;
4. Building sustainable communities; and
5. Responding effectively to climate change.

Under each of these strategic objectives are a number of goals. For each objective there are several interventions by which the state aims to achieve goals and objectives. The success of each intervention is measured through the use of multiple headline indicators. The results of these indicators are then fed back via evaluation and feedback loops.

The document also highlights several challenges towards sustainability. These range from the number of people living in informal settlements to the poor access to sanitation, water and electricity. The strategy emphasises the need for sustainable practices and moving away from the strictly economical and energy intensive path on which it is now. This should be done by better incorporating and integrating communities into each other as well as economic activities, reducing urban sprawl, improving public transportation systems and through redefining development objectives. However, this starts by first changing foundational values and behaviour and then restructuring the governance system by building capacity.

In the Strategic Framework for the Implementation of Sustainable Development (2012: 13), it is stipulated that SD in South Africa should encapsulate the concept of need. The focus is especially and essentially on the needs of the poor; and the idea of limitations – those limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs. This is clearly in line with what was defined in the literature review as the foundation and focus of sustainable development. The correlation between what is stipulated in the literature is similar to what is defined in policy and national plans and strategies. However, the results and the rewards defined in the literature are not being seen. Clearly something is missing.

The Strategic Framework for the Implementation of Sustainable Development (2012: 5), which places specific emphasis on SD in the Cape Winelands Region and Cape Winelands

Biosphere, is guided by an international and intergovernmental agreement between UNESCO and South Africa. The signatories to this agreement are obliged to give effect to:

- Conservation (contributing to the conservation of landscapes, ecosystems, species and genetic variation).
- Development (fostering human and economic development, which is socio-culturally and ecologically sustainable).
- Logistical support (supporting demonstration projects, environmental education and training, research and monitoring related to global, national, regional and local issues of conservation and sustainable development).
- Bioregional planning (implementation of bioregional planning and management principles in all projects).
- UNESCO's MaB Programme (fostering sustainable economic and human development and environmental conservation).

The SDI addresses a number of imperatives:

- Climate change – the SDI includes a climate change strategy and promotes climate neutrality, which ultimately sets the development frontiers for humanity;
- Inclusivity – the strategy calls for the general public, communities and individuals to participate in socio-economic development and environmental rehabilitation of the Cape Winelands Biosphere.

These imperatives reflect the global themes of a green economy and the creation of a framework of sustainable development that originated at the Rio+20 UN Conference.

Sustainable development in the Western Cape Province is promoted by the Provincial Spatial Development Framework (PSDF, 2009) as well as municipal Integrated Development Plans (IDPs) and municipal Spatial Development Framework (SDFs). The above policies and legislation provide guidelines and directives to help secure sustainable development; these will be discussed in more detail later in this chapter (Framework for the Implementation of Sustainable Development, 2012: 23).

3.11. Stellenbosch Spatial Development Framework

A Spatial Development Framework (SDF) is a document whereby spatial development and planning in each municipality is guided. It is relevant to briefly analyse Stellenbosch's SDF so that we can gain a better understanding of how the municipality plans to implement and manage developmental initiatives as well as infrastructure development and housing delivery. The SDF is drafted in accordance with the relevant legislative measures whereby the future spatial form of Stellenbosch is guided.

In brief, the chief aims of the Stellenbosch SDF are: To achieve inclusive and shared growth; increase access to opportunities, especially for disadvantaged citizens; improves sustainability by minimising ecological footprints, and; to maintain the unique sense of place of the town and region (Stellenbosch Spatial Development Framework, 2012: 5).

The municipality aims to meet these key objectives via seven strategic perspectives:

1. Creating interconnected nodes with reduced urban sprawl and higher density suburbs;
2. Enabling car-free transport with a focus on cycling and pedestrians while improving access to public transport;
3. Promoting inclusive economic growth by making sufficient industrial land available, by appropriately locating public land for agriculture and conservation, and by providing informal retail places and spaces;
4. Optimal land use through the promotion of subdivisions and urban infilling as well as ensuring that land is used for its most sustainable and appropriate use;
5. Resource custodianship with strategic focus on solid waste, fresh water, waste water, energy and construction materials;
6. Food and agriculture which is sustainable and responsible; and
7. Ensuring that the heritage and place identity of the town and its surrounding region is preserved, whilst maintaining its popularity as tourist destination

(Stellenbosch Spatial Development Framework, 2012: 14-31)

3.12. Conclusion

The aim of this chapter was to briefly summarise and highlight the most relevant policies, programs and plans which should be implemented by the three tiers of government with the aim of ensuring integrated environmental management and sustainable development. SD is

identifiable in many of the national, provincial and municipal government policy documents. IDP's, spatial development frameworks, and other guiding documents all focus, to some extent, on the promotion of SD. However, while the focus on SD is prevalent across nearly such a wide range of legislation, policies and guidelines, in practice it has been non-existent in many places in South Africa, nowhere more so than in informal settlements and in particular Kayamandi.

By analysing the legislation and PPP, we can gain a better understanding of the government's vision for the future. The documents are well known for being progressive and inclusive, they are full of promises but the implementation of policy seems to be a recurring problem in South Africa. It is also clear that the current situation within informal settlements like Kayamandi is in contravention or not in line with what is stipulated and envisioned in PPP.

Through the analysis of PPP an understanding can be gained about what the citizenry's rights are and what government's obligations are towards these rights. From analysing the PPP one can start to identify where government has not delivered in implementing these PPP, especially at a local level and with regards to informal settlements. This will then allow us to describe where and how these gaps can be filled.

Chapter 4: Stellenbosch and Kayamandi at a glance

4.1. Introduction

The literature review has given considerable background about the most important concepts at hand. These concepts include SD, poverty, informal settlements, monitoring and evaluation and good governance. The chapter on policy, plans and programs provided context about what government's intentions are with regards to development, and also acted as a summary of the legal frameworks and plans dealt with when considering development in informal settlements.

The focus of this chapter is to give background on the origins and history of Stellenbosch and Kayamandi. From there, demographic and socio economic data will be briefly summarised and discussed. The state of infrastructure provision and housing delivery will also be discussed. Finally, some of the most important and noteworthy environmental, social and economic concerns will be highlighted, as they are relevant going forward.

Ultimately the aim here is, to identify where Stellenbosch Municipality is in relation to what is stipulated in PPP. By examining demographic and other socio-economic data alongside the current state of service delivery we can gain insight into where the major problem areas in Kayamandi are. Through the identification of socio-economic and environmental issues this will enable the research to focus attention on specific areas in order to promote sustainability.

4.2. Stellenbosch: an overview

Stellenbosch is the second oldest town in South Africa (founded in 1679), and is situated about 30 km from Cape Town in the heart of the wine-producing region of the Boland (Dennerlein and Adami, 2004). The town's population is estimated to be at 140,000 and includes 55 per cent coloureds, 24 per cent Africans and 21 per cent whites (Cubizolles, 2012: 109).

Since the end of apartheid, South Africa has received more and more foreign visitors and has strengthened its position as a tourist destination. The number of visitors rose from 4 million in 1994 to 6.7 million in 2003 and 9.7 million in 2008. The town, at the heart of the Cape Winelands, is particularly attractive to foreign tourists, who represent 90 per cent of visitors. Tourism is thus a prosperous economic sector. In 2007 Stellenbosch Tourism Information (STI) recorded 1,118,740 nights spent there, and estimated that the money generated by STI members in the local economy was R1,320,714,578 (Cubizolles, 2012: 110)

4.3. The origins of Kayamandi

Historically Stellenbosch is one of the oldest towns in the country, and was the centre of “Afrikanerdom” during the apartheid era, with the university playing an important role in educating the white elite. Now, the town’s residents predominantly live within three sections: Kayamandi, Cloetesville and the Stellenbosch centre, which comprises of the university campus as well as several high income “white” neighbourhoods (Rock, 2011: 14).

Unsurprisingly, the reality and to a large extent the socio-economic landscape of Stellenbosch rests upon previously administered apartheid planning schemes. Before the Group Areas Act (1950), the Stellenbosch municipality introduced separation and control measures. Whites were moved away from people of non-European origin. Kayamandi became the designated township for people of African origin, most predominantly the Xhosa people, while Cloetesville and Idas Vallei were designated to those of Cape Malay or coloured origin. The Stellenbosch Divisional Council Regional Development Scheme in 1967 was a key proponent in implementing the Group Areas Act, and people were relocated away from the central Stellenbosch town towards peripheral settlements such as Kayamandi (Nicks, 2012: 32).

Kayamandi can be regarded as the second oldest township in South Africa, although at the time of its founding it only consisted of 80 farm workers and housekeepers (Rock, 2011: 11). In 1948, when apartheid became official policy, the township grew and became significantly more informal. Apartheid laws dramatically fuelled poverty and family degradation within the township. Within the township, residents were excluded from political decisions that exacerbated inequality and compounded injustices.

Planning under the new democracy has undoubtedly witnessed a dramatic shift in political priorities. Spatial planning became significantly more concerned with undoing the injustices of the past. The Stellenbosch and Environs Sub-Regional Plan in 1995 represented the first swing in planning policy. The plan aimed to replace the nomenclature for residential areas as well as redefining the blurred line between urban and rural areas. The plan placed an emphasis on sustainability, whilst also expressing concerns about the need to promote tourism, conserve the natural ambience and visual quality, and to protect agriculture and promote densification (Nicks, 2012: 25).

The Winelands Integrated Development Framework (WIDF) in 2000 was the next step in spatial planning for the Stellenbosch area. The WIDF was a large and comprehensive plan that refined the biosphere reserve strategy by applying a buffer zone, which was a constrained area that protected the “core” areas. The plan had several clever mechanisms that signalled a shift towards more sustainable and ecologically conscious planning (Nicks, 2012: 26).

Racially biased policies and legal frameworks of the apartheid era, has had a dramatic influence on the urban landscape and functionality of South African cities and towns. The divisional structure of planning and development initiatives has led to informal settlement growth and ‘unhealthy’ urban settlements. Although there has been a significant shift in spatial planning, especially with regards to being more sustainable and ensuring social justice, it is still clear that the spectre of the past still compounds ecological degradation and informal settlement growth. More importantly there remains a huge gap between what is envisioned in policy plans and documents and what is happening in reality.

Informal settlements are a huge issue to address in order to move towards a more sustainable future. Thus, many developmental initiatives have been focussed on regenerating informal settlements in order to promote socio-economic development while reducing environmental degradation and the same has happened in Kayamandi but with limited success. Clearly there is a missing link.

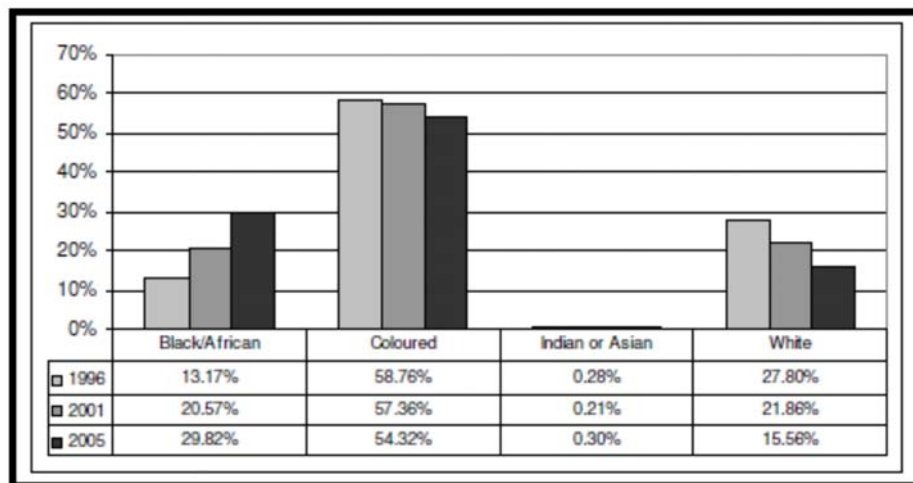


Figure 4.1: Population group of the Stellenbosch municipality 1996, 2001 and 2005. (Social Survey, 2005: 83).

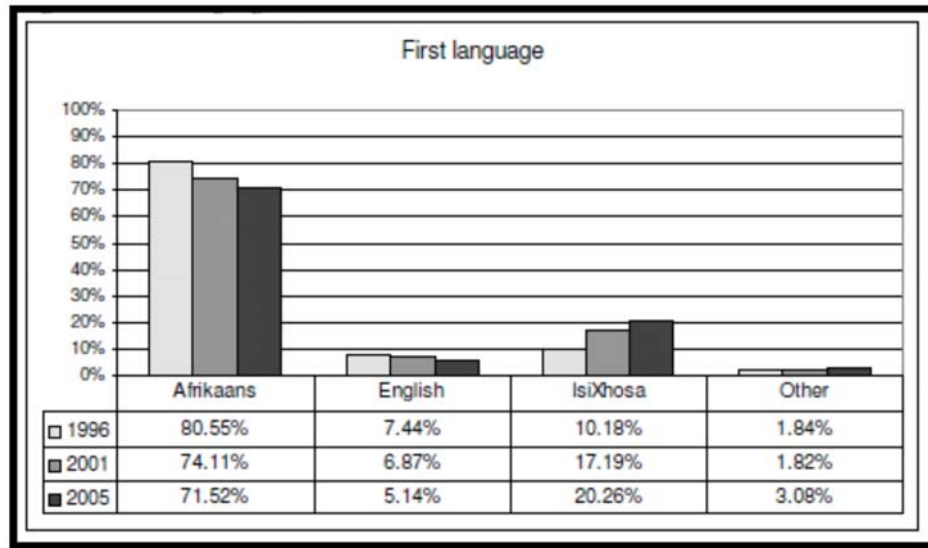


Figure 4.2: First Language 1996, 2001 and 2005. (Social Survey, 2005: 84).

Right outside this prosperous and economically active town sits Kayamandi, which is a 79 hectare predominantly black township. A socio-economic survey done by Arcus Gibb Engineering Consultants in 2004 estimated that Kayamandi's population consisted of 14,264 people of African descent, 354 coloureds and 18 whites (total 14,636). However, recent figures suggest that the population of the township can be as high as 22,000, with an annual population growth rate estimated at about 10%. The growth and transient nature of the population contributes to the already insufficient and stagnant service delivery within the township. It is estimated that Kayamandi has a housing backlog of 3,000 units that is accompanied by a three-year waiting period (Darkwa, 2006: 70-71). For these people Kayamandi is home, a place to live and to work, a place for their children to play and go to school. Ironically enough, the direct translation of the word "Kayamandi" is 'home sweet home'. As these residents struggle each day to secure a livelihood for themselves and their families while dealing with the many harsh realities that are synonymous with informal settlements, it becomes increasingly clear that this is not the home they want or deserve.

There are about 3,700 households in Kayamandi (Stellenbosch Municipality IDP, 2005:10). The difference between the male and female population is not very great, with a 50/50 split between males and females. The labour force in Kayamandi consists of 4 506 employed, 3,444 unemployed and 2,739 people that are not economically active (Stellenbosch Municipality IDP, 2005:10), this reflects an unemployment rate of 35.4% according to the

social survey (2005: 27) with 16.4% of these individuals stating that they are unemployed because they cannot find work. Furthermore, 25.1% of Kayamandi's residents stated in the social survey (2005: 30) that they have no means of income whatsoever. 330 people have a qualification higher than matric; 1,735 have a matric qualification; 4,110 had some high school education; 752 completed primary school; 1 644 had some primary school education; and 702 had no schooling at all (Darkwa, 2006: 71-72)

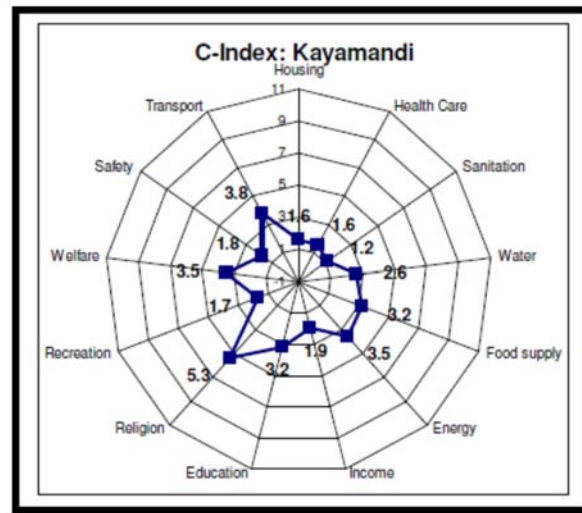


Figure 4.3: C-Index Kayamandi. (Social Survey, 2005: 6).

Kayamandi has one library, one resource centre (Kamvalethu Centre), one high school, one primary school, two crèches, six places of worship, one police station, one clinic and one community hall. The high school has 2,200 learners, 15 classrooms and a teacher:student ratio of one teacher to 45 learners (1:45). The primary school consists of nine classrooms, 1 200 learners and a teacher:student ratio of one teacher to 50 learners (1:50). The township also has a few general dealers and numerous “spaza” shops. There is one rugby field and one soccer field which serve 27 different clubs in Kayamandi (Darkwa, 2006: 72-73).

Electricity, on a prepaid basis, is available to households, six households use gas, 135 households use paraffin and 84 households use candles as a source of energy (Stellenbosch Municipality IDP, 2005:10). The IDP (2005: 11) continues by stating that 561 of the 912 formal dwellings have an indoor tap facility. A further 507 dwellings have tap facilities in their yards. Council-built hostels (brick) have one indoor tap in the kitchen and one in a bathroom to serve all residents in that hostel. The 38 prefabricated hostels are each served by

one outdoor communal tap. In some areas there is just one tap in each zone and 1,117 dwellings are served by a community tap that could be as far away as 200m from the dwellings.

Occupants of formal houses have access to flush toilets. There are 3,132 households who have access to these flush toilets whilst 12 households make use of septic tanks. Six households use bucket latrines whilst 207 households have no access to any sanitation. This totals 3,315 households whereas the document analysed stated that there are 3,700 households in Kayamandi. No mention is made of the other households (Darkwa, 2006: 73). At the time of the survey, refuse was collected weekly from 2,934 households while 114 households had their refuse collected monthly. 195 households used a communal dump, 108 had their own dumps and 12 households have no refuse disposal in Kayamandi (Stellenbosch Municipality IDP, 2005:11).

These statistics, sourced from the Stellenbosch IDP and other studies, serve as a guideline to the current situation in Kayamandi, with regards to the physical infrastructure and social facilities. However, there are numerous discrepancies in the statistics and data sets from the various sources.

4.4. Social movements and community groups

Frank and Fuentes (1987: 150) explain the importance of social movements and community groups by suggesting that these movements are related to political and economic ideologies and remain important agents of social transformation. The conclusion to draw from this is that community groups and movements tend to reflect a shared social consciousness, and play an important role in addressing the various issues faced by their respective communities. These groups play a significant role as a means of feedback and community interaction. The importance of this fostering of community cohesion cannot be overstated, and thus an enabling environment has to be created whereby more social groups can flourish. Social groups or movements can play a significant role in promoting leadership within a community. Leadership is vital in presenting a unified front for a community, whereby the community can be heard through a voice that represents the needs and desires of the entire community in question.

Generally, residents in Kayamandi are predominantly involved in the community via church or sports. However, other groups exist which are orientated around arts and culture, including choirs and dancing groups (Du Plessis, Heinecken and Olivier, 2012: 6-16). This is clearly reflected in NGO'S like Prochorus and Legacy and their community initiatives that are predominantly sports and religion based. These non-profit organisations also offer health groups, but these are in turn linked to faith-based groups. With regards to political and trade union associations, the majority of residents support and are members of the ANC and COSATU. The most alarming part of Du Plessis, Heinecken and Olivier's (2012: 15-17) asset mapping project in Kayamandi is the fact that very few educational groups exist in Kayamandi and also that no environmental groups exist. It is clear that more social groups need to be enabled, where focus is placed upon education, for children and adults, and also on the reversal of environmental degradation.

Additionally, there exist numerous divisions in Kayamandi. For instance, there are tensions between the formal and informal (Enkanini) areas of Kayamandi (See Addendum 4). Kayamandi is divided into four wards, which can be seen as a representation of political divisions, as each ward director following their own agendas rather than forming a collective agenda for Kayamandi as a whole (Stellenbosch IDP, 2014: 58). There are also considerable divisions between various groups of different religious denominations. This represents a lot of divisions, tension and conflict within a relatively small area, and does not yet take into account those conflicts and divisions that exist between Kayamandi and other surrounding areas and the greater Stellenbosch town.

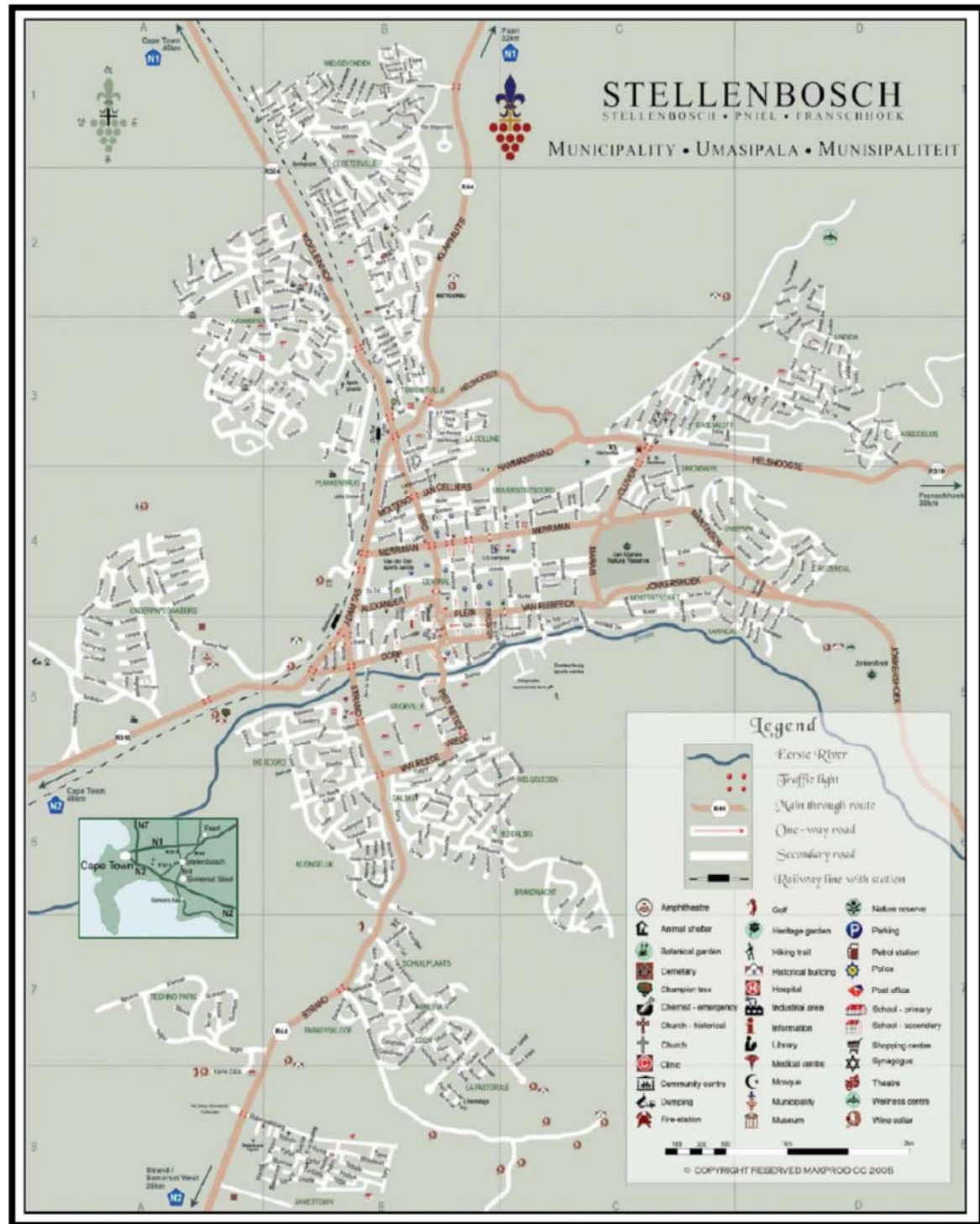


Figure 4.3: Map of Modern Day Stellenbosch. (Rock, 2011: 8).

4.5. Issues facing Kayamandi

As with many informal settlements around the world and in South Africa, Kayamandi faces several socio-economic and environmental issues which infringe on their basic human rights and drastically impede the citizenry's quality of life.

4.5.1. Socio-economic Issues

Informal settlements tend to be subject to a variety of socio-economic issues. To name but a few, these generally range from low-income levels, high unemployment rates, high prevalence of crime and low education levels. Kayamandi is no different, and these are issues which the town's inhabitants frequently come face to face with. Kayamandi also has high crime rates (Violent and non-violent), low education levels, poor health care services, high prevalence of infectious disease (HIV/AIDS and Tuberculosis) and a large portion of the population are under the age of thirty (Du Plessis, Heineken and Olivier, 2012: 6-11).

The lack of economic mobility and the lack of economic opportunities are further compounded by the transient nature of Kayamandi's residents. This fuels and exacerbates inequality and makes the implementation as well as the success of developmental initiatives extremely difficult. Furthermore, there is lack of social facilities that mobilise social movements. These factors, which are prevalent in most informal settlements, are synonymous with unhealthy and unsustainable urban areas. Extremely poor service delivery and lack of participation and stakeholder engagement further aggravates these issues. Economically it does not make for a healthy or an attractive investment climate and economic growth seems to be stagnant in such areas.

Alongside the dominant economic issues such as unemployment, there remain many equally important social issues that ravage informal communities. In Kayamandi, there is a tremendous lack of appropriate care for toddlers and small children. Many parents send their children to makeshift crèches, which do not have the appropriate facilities or trained staff to look after and care for the children. Also, there is only one primary school and one high school in the area. Alcohol and drug abuse is common among inhabitants, and many experts believe that this further propels unemployment as well as criminal activity in the area.

Health remains one of the largest issues in Kayamandi and informal settlements in general. Cholera and tuberculosis is highly prevalent in Kayamandi, this can be due to very poor service delivery and sanitation, whilst HIV and AIDS remains a continual issue. There are several key trends that have emerged from field-based research of current approaches to sanitation demand and delivery in informal settlements, with Kayamandi being one of the cases. Health hazards are frequent and constantly present, and though residents are concerned

and actively try and address these issues and their needs in varying degrees, they have achieved very limited success. The maintenance of sanitary and water facilities is clearly also a key issue contributing to this (Van Wyk, Cousins and Lagardien, 2004: 128).

4.5.2. Environmental Issues

The greater Cape Town metropole, including Stellenbosch and Kayamandi is situated within the Cape floral kingdom. It is the smallest, yet most diverse of the six floral kingdoms and contains nearly 9,600 plants species of which 70% is found nowhere else on earth (Portfolio of Sustainable Best Practice, 2005: 2). This floral diversity is a product of steep topographical gradients, including altitudinal, geological and rainfall gradients, which have combined within this biodiversity hotspot to form a variety of habitats. Furthermore, six of the national vegetation types are only found within the greater Cape Town area. Of these six, five are classified as “endangered” or “critically endangered” (State of Cape Town, 2006: 20). This emphasises the urgent need for good environmental management and sustainable development within and around the greater Stellenbosch area.

The areas of indigenous vegetation around Stellenbosch are subject to a wide variety of threats. These range from urban expansion, to excessive application of herbicides and pesticides and bush fires. These threats all contribute to the destruction of natural habitat and the loss of biodiversity. The natural systems of Stellenbosch, i.e. fertile land, rivers and indigenous vegetation are increasingly being physically, ecologically and visually degraded through such activities. Furthermore, the town’s carbon footprint is continually growing through the use of energy-intensive road, pipe, and cable materials, with knock-on effects on the water supply and waste management systems (Nicks, 2012: 27). Poor governance, environmental management and insufficient service delivery in Kayamandi is a catalyst which drastically impedes the integrity of the natural systems surrounding Stellenbosch.

Generally informal settlements tend to have significant impacts on the environment; this is attributed to poor service delivery and a lack of infrastructure. In Kayamandi where waste and sewage management is poor, sewage and other effluent is released into nearby rivers such as the Plankenburg River. In a study done by Britz et al. (2013) it was discovered that the Plankenburg River contains significant amounts of coliforms, faecal coliforms and *E. coli*. Furthermore, traces of Coagulase-positive staphylococci, *Salmonella*, *Listeria* and intestinal enterococci were also evident in the samples taken from the river. The implication

of this is that this water is completely unsuitable for irrigation purposes and even less so for consumption. The Plankenburg River runs through a part of the Stellenbosch town, including residential areas and then feeds the iconic Eerste River.

Kayamandi impacts the environment and fuels environmental degradation in several ways. Apart from the pollution of the Plankenburg River, waste management in the settlement is close to non-existent. Residents commonly dispose of waste at unsuited or illegal dumping sites or within the township itself, next to roads, in field or next to rivers. This has severe detrimental impacts for the surrounding environment as well as the greater Stellenbosch municipality.

Kayamandi has also witnessed many fires that have ravaged informal housing units within the settlement. Not only is this a huge loss to the people whose dwelling it is, but these fires run the risk of spreading outwards and can lead to larger bushfires, which has led to widespread devastation in the past. This propels habitat destruction and the loss of already threatened Fynbos vegetation.

4.6. Conclusion

This chapter gave a brief history of Stellenbosch and Kayamandi, while identifying some of the aspects that played a role in shaping the township as it is known today. This serves as background to what the current state of affairs are with regards to infrastructure, demographics and social facilities within Kayamandi.

It is clear that there are several of concerns that have to be considered by the various proponents of development when approaching SD in Kayamandi. By analysing the policy objectives stipulated in Chapter 3 in relation the reality in Kayamandi clearly it is evident that there is a lack of policy implementation at the local level. There are some genuine issues which are not being addressed by national, provincial, regional and local policy. This is reflected by the data and issues highlighted in this chapter

It can be deduced that SD is integral towards shaping a more prosperous future for residents in Kayamandi as well as other informal settlements. Additionally, it seems that the proponents of development who operate within Kayamandi are yet to scratch the surface in

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alleviating the socio-economic and environmental issues in the community. Further analysis will now be conducted on a more local scale with the aim of identifying why these policy objectives are not becoming a reality in Kayamandi.

Chapter 5: Proponents of Development

5.1. Introduction

In preceding chapters, a literature review was given that focussed on important factors in SD, the measurement of progress, the upgrading of informal settlements and good governance. Subsequently, the focus shifted to Kayamandi itself, to give an overview of the current state of its infrastructure, its socio-economic demographics, its facilities and community groups. Finally, data was given and discussed about environmental, social and economic issues in the area. Together these elements should then serve as a solid theoretical framework for the case studies discussed in this chapter.

Keeping the research aims and objectives in mind, the intention of this chapter is to analyse the case studies at hand. These cases regard the proponents of development that are actively trying to promote development within Kayamandi. A thorough analysis of these case studies, will hopefully reveal a correlation between the challenges these institutions face in implementing their various developmental initiatives and why, despite these organisations' concerted efforts, they have only been able to merely scratch the surface in promoting change within this specific community. The intention is to identify the collective reasons why the objectives set out in the PPP are not being realised, and to pinpoint the missing link with regards to development. This chapter will focus on the NGO's, governmental institutions and organisations, as well as the private sector and University of Stellenbosch, who all implement programs and initiatives to promote development in the area.

5.2. Proponents of Development

As stated in the literature review, sustainable development is development that comprises three key factors: the social, the environmental and the economic. Good governance across these three spheres can essentially be seen as the link that ties the three pillars together. Thus, development has to consist of what is referred to as the triple bottom line of sustainability, whilst simultaneously ensuring that present generations can meet their own needs without comprising future generations' ability to meet their own needs. It should be noted that the case studies at hand do not necessarily each investigate or address issues associated with the triple bottom line of development. In most cases each of these organisations or institutions and their respective initiatives address and focus on one of the pillars of sustainability, in other words, they tend to focus either on social, economic or environmental issues. However,

whether their focus is on one or any combination of the three factors, each still contributes to development and can thus be referred to as proponents of development.

Here a developmental initiative can be defined as any initiative (i.e. any program, policy, project etc.) which is administered or implemented by the private sector, any of the three tiers of government (national, provincial or local), non-governmental organisations, or via the means of private-public partnerships. If such an undertaking aids development in any way or is applicable to any aspect of the triple bottom line of sustainable development it falls within the scope of what can be regarded as a developmental initiative.

5.2.1. Stellenbosch University

Mattoon (2007: 1-4) argues that universities play a major role in the development of their surrounding communities, especially with regards to economic growth and knowledge creation. This generally occurs through, transplantation, the upgrading of existing industry, diversification of industry. In Stellenbosch this is no different. Over the years the university has contributed significantly towards local and regional development and growth through its many initiatives and programs.

i. Ishack Project

Description

The sustainability institute has become one of the main proponents for sustainability in Kayamandi with an innovative solar energy alternative for the residents of Enkanini; this project is called the Ishack Project. The project is the result of an 18-month trans-disciplinary research project by Stellenbosch University's TsamaHub, an initiative of the HOPE Project and the Sustainability Institute in collaboration with the Stellenbosch Municipality and residents of Enkanini and Kayamandi (www.thehopeproject.co.za).

The Ishack Project is providing solar electricity, on a pay-for-use basis to residents in Kayamandi. Each client pays a monthly fee or subscription. The energy service provides lighting, television, cell-phone charging and additional energy for music players and radios. The project aims to add fridges and water heaters in the future (www.ishackproject.co.za). The project shows that a rise of an alternative response to the energy crises in Kayamandi has the potential to address the critical issues related to energy poverty, especially with regards to affordability and sustainability.

The design and subsequent material was chosen with respect to affordability, accessibility and impact on thermal comfort. The ‘Ishack’ is an abbreviation of “Improved shack”. The shacks in question are north-facing with a roof overhang, which maximises passive heating potential in winter and provides shade in the summer. The windows of the shacks are strategically placed on the north and east walls to let drafts of wind in for better air circulation. A lining of disused cardboard boxes sprayed with fire retardant paint is also used, which improves insulation and reduces potential fire hazards. The floors of the informal housing units are made from bricks which are sourced from the nearby landfill sites (www.thehopeproject.co.za). The shack design also includes a gutter that allows for the collection of rainwater for personal use.

The vision and objectives of the project

The vision of the project goes far beyond simply providing clean, safe and affordable energy, it also includes services that can be incorporated into the model, such as off-grid sanitation, ecological housing, water services and food production. The project aims to provide the service to over 1500 clients (www.ishackproject.co.za). The Ishack project uses solar electricity to demonstrate how ecologically sound technologies can be used to upgrade slums in several crucial and appropriate manners, while simultaneously building enterprising capacity within the community. The model on which the project is based recognises and utilises significant existing social, human and physical capital within informal settlements. One of the key objectives of the business model is to harness the existing capital to unlock a range of social and economic benefits and opportunities for the community (www.ishackproject.co.za).

The project identified that each shack or dwelling had to be in line with the following criteria:

- Thermal Comfort;
- Design Complexity;
- Indoor Air Quality;
- Fire Resistance;
- Recycled and Renewable Material Content;
- Cost and;
- Visual Appeal (Boix-Mansilla, Chua and van Breda, 2010).

This was identified as the seven key objectives in ensuring an improved dwelling that contributes towards sustainability and improved standards of living.

The project as a developmental initiative

The project is training a group of local franchisees called “Ishack Agents” to install and maintain solar systems and to market the service in their community. This aspect of the initiative generates employment, local economic empowerment and valuable education and training which can be used later in other professional industries (www.ishackproject.co.za).

Challenges & Lessons Learnt

The Ishack initiative has faced two major initial hurdles. First, the mistrust between the municipality and residents has nurtured a suspicion among residents that the municipality will settle on the solar option instead of providing grid-based electricity as per their demands. Second, the scale of the Ishack Project is still only limited to 100 units, and residents are still unclear on how the project will be expanded, resulting in unpopular sentiments against the entire intervention (Stellenbosch Municipality, 2012: 4-5).

The success of the Ishack initiative suggests that informal settlements can be spaces for a different kind of micro-level governance. An informal settlement does not necessarily need to follow the usual trajectory of waiting eight years or more for service delivery, nor do they need to fall back on the market option where entrepreneurs sell solar panels and batteries or collect waste in the settlements. It signifies a move away from green- or brown-fields upgrading and showcases the success coupled with in-situ or incremental upgrading (Boix-Mansilla, Chua and van Breda, 2010).

One of the major lessons learnt from the project thus far is the fact that viable and appropriate technology must be used alongside roles that are clearly negotiated and communicated. The settlement also needs to have a sense of ownership. This means that they have to input into the implementation of service rather than just being offered a service (Boix-Mansilla, Chua and van Breda, 2010). An additional challenge that the project managers identified was the notion that the income of the project is derived from the users and without this, repairs and maintenance would be impossible and assets will run down. The entire system is dependent on a minimum flow of income.

Successes

The use of solar panels, and the fire retardant material associated with the Ishack significantly reduces health and safety threats that are synonymous with informal settlements due to the use of fires, paraffin and other flammable substances. Shack fires are a huge problem in South Africa and Kayamandi and have been known to cause significant physical damage to property and loss of human life. Also, these fires have been known to spread towards areas of natural vegetation that propels habitat and biodiversity loss.

The project will not be municipally or state driven, but rather market driven, which means that an entrepreneur would be responsible for maintenance and upgrades. However, it must also foster cooperation as this signifies not only personal empowerment but also community empowerment, participation and cooperation (Boix-Mansilla, Chua and van Breda, 2010).

The success in the project lies not only in the promotion of sustainability and sustainable development, but also in the fact that it has created employment, it has created opportunities for learning, education and experience. Most importantly, it has improved the quality of life for many residents in Kayamandi. The project has also shown that it is possible to use locally-sourced, easily-procured materials which are cost effective, to build better shelters which are safe and which improve the quality of life of its inhabitants. It has shown that innovation and collaboration holds the key to unlocking the potential within informal settlements. This project has also led to the creation of leaders within a local community, who can act as change agents in the future.

5.2.2 Non-Governmental Organisations

NGO's can be described as private, self-governing, non-profit organisations that focus on promoting people-centred development, among other objectives. Generally, their primary objective is to render assistance to individuals and communities in order to promote sustainable development at grass-root level. Participation, social learning and community capacity building is seen as some of the most important commitments these organisations have made towards their respective communities (Davids, 2011b: 68).

i. Prochorus Community Development

Description

Prochorus is a non-profit community-based organisation in Kayamandi that was established in 1996. The organisation's primary focus is to take care of the poor. They partner with local churches within the community to ensure volunteer involvement, access to resources and integrity of the management of projects. The organisation offers programs that are sustainable with overarching aims to ensure that every person has the opportunity to reach their full potential spiritually, intellectually, physically and emotionally (www.prochorus.org). The organisation is sponsored by a variety of external benefactors such as the Shofar Christian church, Distell and the Rautenberg Family, to name a few.

The organisation's primary objective is to redress the social imbalances in society and to meet the need and concerns of the local community. The organisation exists to promote social development and advancement on community and individual level. It focuses on the developmental needs of all communities, regardless of socio-economic standing. Advantaged communities are targeted for the purpose of mobilising and advancing their philanthropic capacity, while disadvantaged communities are served according to the guidelines of needs assessment studies and the accessibility of resources.

Prochorus' vision is improving the wellbeing of communities and individuals by promoting and contributing towards the education of both adults and children. The former is done by assisting them in acquiring the necessary skills that will enable them to become financially independent (www.prochorus.org).

Developmental initiatives

1. Crèche support program

Kayamandi has about 30 crèches; these crèches lack the necessary financial and technical capacity to give children the appropriate care they need with regards to early childhood development. Prochorus sources and distributes sponsorships to these crèches so that they can buy and develop the necessary facilities needed. Prochorus also established a program that trains teachers and principals of these crèches so that they have the appropriate training to facilitate the development of young children.

2. Crisis counselling for raped and abused women and children

Prochorus has appointed counsellors to be available to meet with victims as soon as possible with the aim of reducing emotional trauma and to prosecute offenders as soon as possible. Awareness programs have also been developed in order to teach children and women how to protect themselves from abuse.

3. Computer and English literacy programs

This initiative teaches computer and English literacy classes to adults with the aim to significantly broaden the employment opportunities of individuals. The aim is also to use the classroom to teach basic communication skills such as listening, responding and acting on instructions.

4. Kitchen Garden

In partnership with a local church, Prochorus has planted a vegetable garden on the church grounds. The objective of this is to supply their soup kitchen, the Unakho centre and some of the crèches with food. In addition, some groups of people also receive food parcels from them every month. Individuals are also encouraged to learn about, plant and sell vegetables.

5. Local disaster relief

Prochorus has established a partnership with the disaster management department of the municipality of Stellenbosch. This initiative assists households and the community in times of emergency with fires and floods by providing supplies. Supplies are sourced from sponsors and the church, and include clothing and food parcels.

Prochorus has several community development project and initiatives. Additionally to these mentioned, Prochorus has other initiatives which include: A sewing group, the playgroups project, Support-a-child, Centre for the differently abled, Hunger relief and clothes distribution, as well as a drama group.

Challenges & Lessons Learnt

Each of Prochorus' initiatives has faced several of their own unique challenges. However, a central theme is the amount of funding that is required to assist the initiatives. Funding is secured from external sources or sponsors. There is also a strong reliance on philanthropists or volunteers and their skills that are required to assist many of the initiatives in order to build community members' skills and capacity.

ii. Legacy Community Development

Description

Legacy Community Development is an NGO that operates out of Kayamandi. The organisation is represented by its directors: Maphelo Ntshanga, Brendan Venter, Dirk Ehlers and Louise Fourie. The organisation's projects are managed by the permanent staff members in conjunction with volunteers primarily from the Stellenbosch Congregation and University. The Legacy Centre is the base from which this organisation operates in Kayamandi. The multi-functional community centre was constructed in 2002 in partnership with the local municipality. The centre doubles up as day care centre as well as an events hall that hosts other community events such as funerals, weddings, church meetings and concerts (www.legacykayamandi.blogspot.com).

Vision & Mission

Legacy identified that Kayamandi is subject to high population growth, and many of these people live under squatter conditions with limited access to clean water and sanitation, while being exposed to high levels of crime. Low levels of literacy accompanied by high unemployment rates tend to aggravate health related concerns. Additionally, it is generally the children who bear the brunt of these consequences and who subsequently suffer the most. In this lies Legacy's vision and mission. Alongside other institutions they intend to make a difference with regards to these issues (See Addendum 4).

Developmental initiatives

1. Ikhaya Lempilo

Directly translated from Xhosa, this means – “house of health”. This is Legacy's HIV/AIDS programme. The programme initially started in 2009 as a small halfway/respite house where ill patients were treated in friendly and safe environment. From this, the programme has now evolved into a HIV/AIDS facility that deals holistically with the root cause of infection by providing education and prevention. This will include a help desk at the centre where knowledge, resources and equipment is shared with the community alongside home based care information. Adult groups of the Uvuyo initiative will also be trained by getting involved with workshops at the centre (www.legacykayamandi.blogspot.com).

2. Khulani

This initiative is focussed on the children of the community. It originally started as a small group of children who came together to sing and dance, but has since evolved into a program

which helps about 150 children. This is due to the influence of Legacy's volunteers, staff members and sponsors. The vision of the program is to enable those who attend to believe that they can live meaningful lives, through this they become role models to other children in the community. The method used is based on exploration, a journey where each child explores their physical, emotional, intellectual and social potential. The program focuses on building discipline, self-confidence, leadership skills and exploring strengths and talents. Additionally, the initiative also focuses on literacy, emotional intelligence, heritage and value, career development and entrepreneurship (www.legacykayamandi.blogspot.com).

3. Uvuyo

This initiative focuses on transferring skills and helping adults with education and literacy. Various workshops are held, based on a holistic approach where different crafts are taught as well as life skills and health related issues (www.legacykayamandi.blogspot.com).

4. Igadi Ye Themba

Until 2005 the land surrounding the centre was severely underdeveloped. Since then this initiative has led to the development of a community vegetable garden from which the locals can benefit. These vegetables are also used for Legacy's soup kitchen. This initiative has taught locals how to plant and tend to their own vegetable gardens ensuring that they have additional sources of food and nutrition (www.legacykayamandi.blogspot.com).

Successes

The Uvuyo initiative has led to a group of 15 women who specialise in embroidery and crocheted products. Their products are sold at various markets that have enabled them to generate their own income. A second Uvuyo group, consisting of 6 women was also started in 2013. They work on sewing machines, and sew bags from old advertising banners. They created a turnover of about R20 000 in their first year, ensuring income for them and their families. Additionally, these women are also tremendous role models within their community and have motivated others to join and contribute towards similar causes.

iii. Kuyasa

Description

Kuyasa originated in 2001 after a meeting was held between a group of pastors and Jenny and Cassie Carstens to discuss the development needs of Kayamandi. In this meeting they

identified theology classes for pastors, sewing training for women and a youth program as crucial needs towards the development of Kayamandi. After the meeting the group was known as the Kayamandi initiative.

This led to the commencement of English classes and the child sponsorship program in 2002. In 2005 the Kayamandi initiative became registered as an NGO under the name of Kuyasa Horison Empowerment. Since then the organisation has gained several sponsors and has moved to their new location on the Watergang Farm House where they were able to expand their services in their various program areas. Certain parts of the farmhouse were renovated for a skills school. A new computer lab was also donated which Kuyasa has since used to teach literacy and basic computer skills to the youth and adults. Additionally, two sports fields and an amphitheatre was constructed on the premises (www.kuyasa-empowerment.org).

Kuyasa uses a system of six separate levels of support and filtering to filter the youth of the community. The rationale behind this is that as they educate, empower and equip individuals, they want to enable a select group of individuals to move forward to become leaders of greater responsibility within the community. Kuyasa believes that this “learning by doing” model yields greater success and ensures that within the context of the community, home and family, the transformation is much more permanent and holistic (www.kuyasa-empowerment.org).

Vision & Mission

Kuyasa's mission is to empower children and youth of previously disadvantaged communities to become independent while embracing Christian values. The dream is that they will lead and empower others to follow the same set of values. The organisation strives towards mutual trust and learning while showing people that they believe in them. Their teachings include:

- Serving the community with perseverance, sensitivity and adaptability;
- Respecting people, language and culture whilst striving towards the advancement of these people and the environment and;
- Prioritising the community's agenda and placing their needs first.

Through this there is the hope that opportunities will be created in which people can serve their own community as well as others. Kuyasa's philosophy follows seven key principles:

Dignity; Release; Participation; Learning; Empowerment; Ownership and; Simplicity (www.kuyasa-empowerment.org).

Developmental initiatives

1. Arts

Kuyasa has several developmental initiatives surrounding the arts. These programs are for both children and adults and range from activities surrounding the performing arts, a worship band, drama, visual art and various film projects

2. Sport

The aim of the sport programs is the implementation of whole life coaching in sporting codes such as soccer, netball and basketball. These initiatives also aim to advance coaches to an elite technical coaching level, while pursuing academic excellence, and enabling children to pursue and excel in various sport codes.

3. Youth and Leadership

A variety of programs are offered which are focussed exclusively on the youth with the aim of building leadership. These initiatives range from adventure programmes, children's prayer groups, the "Sharing Views" team, and the "Hats and Glasses" initiative.

4. Social Development

The social development program includes a feeding scheme which gives food to orphans and the children of unemployed parents. There is also a safe house that is a safe haven for people who have no shelter and for the victims of physical abuse or illness.

5. Training and Job Creation

Kuyasa offers programs for pastor training, textile designing and woodwork.

6. Life Skills

The life skills program includes a learning centre which provides students with holistic support as well as extra classes and special workshops enabling them to reach their full academic potential. Adult education is also part of the program as well as computer literacy and training and is linked to the training and job creation initiative.

7. Child Sponsorship

This initiative is essentially an orphan care program that currently cares for 234 orphans and provides these children with economic, physical, psychological and emotional support.

Challenges & Lessons Learnt

In most of the initiatives Kuyasa has a shortage of physical equipment that the children need and use, such as instruments, paint, sporting equipment, etc. There is also limited space for the children to pursue and practice the activities associated with the initiatives. Funding remains an issue and is dependent on donors and sponsors. Financial backing is not only needed to sustain the initiatives but also to organise events where children can showcase their talents (www.kuyasa-empowerment.org).

Successes

Many of the programs have promoted the Development of young people from the age 10 to 16 and 16 to 25, through performing arts, life skills, and Christian leadership. It has fostered the creation of a platform for a safer and better environment for the next generation and beyond. The initiatives have also fostered and built hope within the children and have given them alternatives to the township reality. Programs such as the “Youth Alive” initiative has fostered strong networks and friendships while giving the youth better exposure with regards to performing in the public. It has provided them with a platform where they can showcase their talents in the performing arts. Many of the initiatives have equipped individuals with skills that they would not have learnt anywhere else. The adventure programs promote fitness and teach individuals about first aid, navigation, survival skills etc. (www.kuyasa-empowerment.org).

5.3.3. Governmental institutions

The public sector has a responsibility towards the citizenry to provide them with goods and services. Since 1994 the government’s role has primarily been to promote development for all South Africans while ensuring that good governance is promoted and maintained. The public sector formulates policies, raises revenue, designs and implements public programmes and manages accountability. Further, local government has the authority to render services of a local nature within defined geographical areas. This is done in order to improve the quality of life within the local community it serves. The existence of local government is essentially justified by local economic development, sustainable service delivery, addressing basic needs and the promotion of democracy (Davids and Maphunye, 2011: 52-60).

i. Stellenbosch Municipality

Description

Municipalities play a crucial role in development facilitation. With the use of an integrated development plan, which is fundamental in ensuring sustainable development, municipalities plan, facilitate and implement developmental initiatives as well as infrastructure development etc. The IDP ensures that this process is participative and inclusive. Municipalities also ensure that national and provincial policy is implemented and adhered to at a local level. Therefore, Stellenbosch municipality can be seen as a key proponent of development in Kayamandi. The municipality also has several partners with which it aims to achieve its goals and objectives as stipulated in the IDP.

The municipality has identified several key priorities towards which policy and decision-making should be geared over the next five years. Institutional capacity, municipal transformation, local economic development, good governance and financial viability and management have been identified as key priorities that must receive the most attention in its strategic plan. Additionally, the improvement of relationships between the three spheres of government as well as the review of policy and legislation has also been identified as key strategic priorities of the municipality (Stellenbosch IDP, 2014: 43).

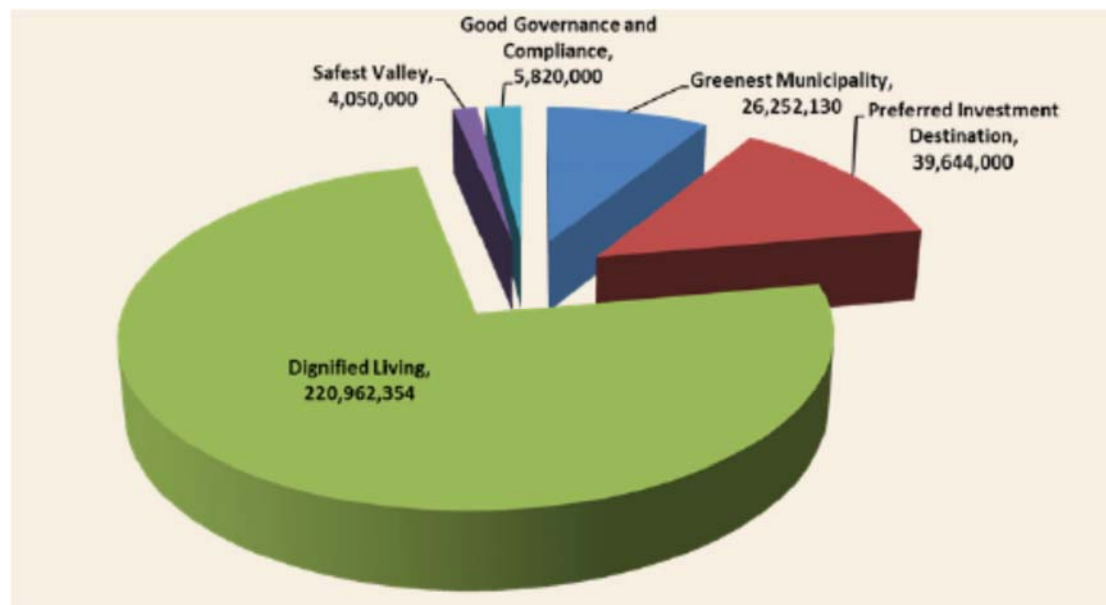


Figure 5.1: Capital Expenditure per Strategic Focus Area 2013-2016 (IDP 2014: 127)

Vision & Mission

The vision for Stellenbosch municipality and the greater Stellenbosch area is to ensure that the municipal area is the innovation capital of South Africa. Additionally, their vision is to deliver cost-effective services that will provide the most enabling environment for the municipality's citizenry. To ensure this the municipality subscribes to the following values:

- Character leadership – to involve communities in planning development, whilst providing regular and transparent progress reports on the various implementation plans;
- Transformation – to create an enabling environment where endless opportunities can be unlocked (this commitment is shaped by the understanding of historical, spatial, social and economic inequalities) and;
- Innovation – a commitment to endlessly review systems, procedures and processes to make them less bureaucratic and more responsive, while acknowledging and rewarding initiatives which show ingenuity and creativity.

Stellenbosch municipality aims to achieve its vision and mission through its overarching strategy. The strategy rests on five pillars or objectives which are as follows: Preferred investment destination; Greenest municipality; safest valley; dignified living, and; Good governance and compliance (Stellenbosch IDP, 2014: 12).

Developmental initiatives

As a governmental institution Stellenbosch municipality has several developmental initiatives ranging from housing delivery, infrastructure development and upgrades to the management of clinics and safe houses in areas such as Kayamandi. The municipality also has recycling, greening and clean-up initiatives. Stellenbosch places great emphasis on the preservation and restoration of heritage and conservation sites. Educational institutions and their effective management also play an important role in realising the municipality's vision and mission while actively implementing several initiatives and providing education and building a citizenry which is active and participatory.

Other notable initiatives which have been implemented in the Kayamandi wards are the construction of the Kayamandi sports complex and stadium. This has addressed several business-development axes. This project can be a catalyst for small business and tourism

development and is one of the key initiatives of the Kayamandi tourism corridor project. This is done in line with streamlining the procedures for formal and informal township tourism enterprises as well promoting small business development with the aim of promoting local economic development (Local Economic Development Strategy, 2012: 28-30).

Additionally, the municipality also implements large development projects in Kayamandi such as the Kayamandi tourism and economic corridor project which aims to develop the town centre of Kayamandi, provide sporting facilities and integrating Kayamandi into the surrounding communities such as Cloetesville and central Stellenbosch. A key component of the entire project is the Kayamandi tourist centre. This is situated at the entrance of Kayamandi and is envisaged as a catalyst for social change, racial tolerance, increased cultural expression and economic development (www.dmp.co.za).

Challenges & Lessons Learnt

The IDP (2014: 58) identifies several key issues in the Kayamandi wards which have hampered progress with regards to economic growth and social development in the area and that have to be dealt with. There is a shortage of land for housing as well as several tenure issues; this is also accompanied by the backlog and slow roll-out of the implementation of planned housing projects for the area. Additionally, electricity, waste management, community safety and health have also been identified as key problem areas. The municipality has also recognised that a taxi rank and operational community centre is fundamental to promoting economic growth and incorporating the local citizenry into social and economic activities in the municipal area.

Additionally, financial capital to ensure and promote development remains a constant issue. This goes hand in hand with poor management and resource allocation, and is also reflected by the relatively poor implementation of policy, especially in Kayamandi. This is further exacerbated by political, racial and spatial disparities that exist in Stellenbosch.

Successes

Stellenbosch municipality and its developmental initiatives have seen some significant successes, especially with regards to sustainability and infrastructure roll-out and development. The Separation-at-Source program, which is a recycling initiative rolled out in 2011, in each of the 22 wards and has been operating successfully since then. The construction of a new cell at the Devon Valley landfill site was completed three months

before the estimated handover date. The cell provides much needed landfill airspace for the next three to five years. Unfortunately, however, this initiative is limited in scope and impact and more is needed if the problems are to be comprehensively addressed.

5.4.4. Private Sector

The private sector and the associated corporate or private sector social responsibility contributes significantly towards community or social development through mechanisms of economic growth, or through the stimulation of markets in some deprived areas.

1. AmaZink Live

Description

AmaZink Live is South Africa's first township theatre that offers local and international guests culturally authentic music, performances and food. The show, the food, the crafts on sale and other such initiatives are all locally produced and thus gives patrons not only a unique experience but allows the locals to express their cultural traditions and talents (www.amazink.co.za).

AmaZink originally started out as a tavern and a pool hall. In 2009, focus was shifted for use in accommodating the influx of tourists during the 2010 FIFA World Cup. This project was given further attention due to the Kayamandi corridor tourism project. Leon de Wit, an entrepreneur, and Jan Vivier, are currently the owners of the theatre, and played an important role in the transformation and development of AmaZink from a tavern into a theatre. Despite the fact that they are not local Kayamandi residents, they wanted to use the theatre to showcase local talent while also ensuring that locals and the surrounding community benefit from the theatre (See Addenda 1).

Developmental initiatives

AmaZink Live does not have any developmental initiatives as such, but has been proven to be a key proponent of economic growth in Kayamandi. The theatre only employs locals in every aspect of the business from the performers and cooks to the waiting staff and cleaning crew, thus serving as a valuable employer of local people. The theatre has become well known throughout Cape Town and is popular among international visitors, ensuring that many visitors come to Kayamandi. It has thus been a key driver and proponent in Kayamandi's

tourism sector. Additionally, the University of Stellenbosch's English Department uses the venue for poetry readings and performances.

There have also been other spin-offs associated with the theatre, such as the security company that was created by locals to ensure the visitors and their vehicles remain safe during shows. The theatre's drummer, Vuyo, is also a travel guide and the influx of tourists has enabled him to promote and grow his business through AmaZink (See Addendum 1).

Challenges & Lessons Learnt

Initially during the transition into the post-apartheid government AmaZink had several issues with regards to liquor licenses and other permits which had stagnated growth and business development. Since then, moving from tavern, to eatery, to theatre, the business has grown from strength to strength.

When Hendrik Lange (Marketing Manager for AmaZink Live) was interviewed during the research, he was questioned on why he thought AmaZink has been so successful and had been able to survive, and do so profitably in a place where little else does. He stated that he believes it is because it has enabled the locals to have a stake in something and also because it has enabled them to do things that are fun and entertaining while having the opportunity showcase their talents, traditions and their community. It has given them something to be proud of, but more importantly they have had the chance to enjoy themselves while doing so. They have become well-known within the community, and have also become role models and leaders (See Addenda 2).

ii. The Greater Stellenbosch Development Trust **Description**

The Greater Stellenbosch Development Trust (GSDT) operates out of the Ikhaya Trust Centre in Kayamandi and was constructed in 2002 from the ruins of an old beer hall by the GSDT. The GSDT was established in 2002 by a small group of concerned friends, later supported by donors, with the aim to bridge material and cultural inequalities in the area. The Trust focuses on sustainable projects, which include educational programs for children, cultural and artistic developments and support for micro-businesses and entrepreneurial skills (www.givengain.com). The trust centre also houses various partner organisations such as VisionAfrika, SEED, AmaZink and the InZink amphitheatre (www.gsdt.org.za).

Vision and Mission

The goal of the Trust is to execute projects well, so that models for further application can be created. The trustees believe some of the programs at the Trust will eventually be used as models by other organisations in other communities. The Trust also assists other organisations in Kayamandi with administration or space to work and ultimately to strengthen civil society in Kayamandi (www.givengain.com).

Developmental Initiatives**1. SOS (Strengthen Our Society)**

Research has shown that community organisation often lacks capacity in areas such as financial management, reporting and the monitoring of projects, so this initiative aims to assist community organisations with strategic planning, monitoring, marketing systems etc. while building capacity through courses and seminars. Importance is also placed on ensuring long-term sustainability of organisations and the sharing of power with the civil society (www.gsdt.org.za).

2. VisionAfrika

This initiative supports grade 9-12 learners in their process of personal development and growth. This is done by challenging and eradicating the mentality of helplessness and dependency, utilising life skills training and critical thinking to empower youth to pursue their dreams. It creates a platform for the youth to research, discuss, plan and take action against perceived social injustices (www.gsdt.org.za).

3. 2-22

2-22 originated out of collaboration between the GSDT and VisionAfrika. The project takes underprivileged children from Kayamandi and provides them with after school care, pays for their school fees and uniforms. Since then, the project has grown to care for younger children as well and now consists of a pre-school facility, after-school care facility, a specialised reading program known as “Reading Eggs”, and also life skills orientation programs. The entire project currently consists of 300 children and young adults of which 26 are registered at tertiary institutions (www.gsdt.org.za).

4. SEED

Stellenbosch Entrepreneur and Enterprise Development (SEED) is a non-profit organisation that is dedicated to entrepreneurial development and business growth in the communities surrounding Stellenbosch. With their efforts they have assisted over 750 entrepreneurs with a variety of business support services ranging from training and mentoring, business plan assistance, and directives towards funding and start-up capital. A structure has been developed that enables the development and growth of micro and emerging enterprises from disadvantaged communities around Stellenbosch (www.gsdt.org.za).

Successes

The Greater Stellenbosch Development Trust has seen great success arising out of its efforts and financial backing. The Ikhaya trust centre has become a proponent of development, growth and tourism in Kayamandi and is also a landmark within the community. AmaZink has also had vast success within Kayamandi by creating a profitable, well-known and award winning business and tourism attraction which has served as platform where locals can showcase their talents. AmaZink has also enabled other local business and entrepreneurs to flourish. Additionally, the other projects backed by the trust have seen significant success with regards to businesses and entrepreneurial development, child developmental and education- and work related training.

5.3. Conclusion

This chapter gave a comprehensive overview of the various proponents of development across the private, public and non-profit sectors currently active in promoting the sustainable development of Kayamandi. The various role players and proponents discussed here are responsible for ensuring that the policy objectives stipulated in Chapter 3 are obtained. Initiatives like the HOPE project, the Ishack Project, Kuyasa, Legacy Community Development, Prochorus, the GSDDT and AmaZink Live have made laudable attempts at ensuring development which is sustainable within the community. Evidently, it is clear that these attempts have for the most part been reactive and futile. Subsequently, sustainable development within Kayamandi remains a theoretical dream.

This chapter has illustrated that there is no shortage of proponents of development and that there are several organisations, institutions and initiatives who are constantly trying to influence social, economic change and community development. What is evident, however, is

that these organisations and their initiatives have barely scratched the surface with regards to sustainable development in Kayamandi. They have had success on a variety of levels, but true empowerment and development has not as yet been attained.

Thus, the question remains. How can these proponents of development promote sustainable development in Kayamandi? Which plans can be implemented and how can management or stakeholder engagement be altered in order to achieve the policy objectives visualised in PPP?

Chapter 6: Findings

6.1. Introduction

In the research proposal, the objectives of the research were as follows:

1. Analyse the proponents of development and their developmental initiatives and programs in Kayamandi with the aim of identifying why they have not yet effectively promoted sustainable development.
2. Identify the missing links and give meaningful feedback or recommendations on how national policy can be better realised and implemented as well as how the relevant proponents of development can ensure sustainable development.

The findings of the research in relation to these objectives will be presented in this chapter. Through a thorough analysis of South African and local municipal PPP, alongside the literature review and qualitative research methods, a picture has developed on what is needed in order to ensure SD. The research has identified what the current state of development in Kayamandi is, and what is needed in order to ensure SD and how this can be achieved.

By presenting the findings of the research in relation to the literature review and the subsequent chapters, we can identify the key themes surrounding development in Kayamandi and how it has been approached. From the findings, suitable recommendations can be given through which SD can be more effectively pursued.

6.2. Kayamandi: The current situation

The research has found that it is imperative for Kayamandi to move towards a more sustainable future because of the similarities it has to other informal settlements in South Africa and abroad. However, Kayamandi faces its own set of unique socio-economic and environmental challenges which further exacerbates the need for sustainability within the community as well as the larger Stellenbosch area.

6.2.1. Environmental issues

Stellenbosch and Kayamandi is situated within the highly diverse and sensitive Cape Floral Kingdom which contains about 9600 plant species of which 70% are endemic only to South Africa (Portfolio of Sustainable Best Practice, 2005: 2). In summer times, vegetation is extremely prone to bush fires that are a massive risk to floral and faunal biodiversity. Bushfires often originate in Kayamandi due to the fuels used for cooking or heating, and fires in informal settlements are common and often spread towards areas of natural vegetation or

valuable commercial agricultural land. This threatens human lives and livelihoods in Kayamandi, but also biodiversity and valuable agricultural land.

Poor infrastructure provision and service delivery has meant that a large proportion of Kayamandi's waste and effluent is being dumped and released into the Plankenburg river or is dumped on inappropriate sites, which reduces the aesthetical value of the surrounding area and poses significant threats to biodiversity and human health. Britz et al. (2013) states that vast amounts of faecal coliforms and E-coli traces were found in the Plankenburg River which effectively means that the river is currently a major threat to human health and is contributing significantly towards further environmental degradation.

Additionally, Kayamandi impacts the environment in several other ways. Kayamandi is some distance away from economic activity and public transport systems are non-existent, causing long commutes with high public and individual costs and increased emissions from automobile dependency (Ferguson, 1996: 173). Furthermore, the town's carbon footprint is continually growing through the use of energy-intensive road, pipe, and cable materials, with knock on effects to the water supply and waste management systems (Nicks, 2012: 27).

There is a high prevalence of surface runoff and water body pollution due to poor sewerage and drainage systems (United Nations, 2009: 40). Many of Kayamandi's dwellings and housing units are situated on steep slopes that increase the risk of landslides, and further increases residents' exposure to adverse weather conditions.

The areas of indigenous vegetation around Stellenbosch are subject to a wide variety of threats. These range from urban expansion, excessive application of herbicides and pesticides, and bush fires. These threats all contribute to the destruction of natural habitats and the loss of biodiversity. The natural systems of Stellenbosch, i.e. fertile land, rivers and indigenous vegetation, are increasingly being physically, ecologically and visually deteriorated through such activities.

A large proportion of Stellenbosch's tourism activity and GDP is dependent on its wine industry as well as its internationally renowned scenery, which consists of rich plant diversity, beautiful vineyards, dramatic mountains and meandering streams and rivers. This signifies the importance of reducing environmental degradation and promoting sustainable development in Kayamandi and Stellenbosch.

6.2.2. Socio-economic issues

Kayamandi has a high prevalence of violent and non-violent crimes, low education levels, poor health care services, high prevalence of infectious disease (HIV/AIDS, Cholera and Tuberculosis) and a large portion of the population are under the age of thirty (Du Plessis, Heineken and Olivier, 2012: 6-11). Kayamandi has an extremely transient population which, alongside the lack of economic activity and opportunities, further fuels inequality.

The research has demonstrated that there is a lack of community groups or social movements. The community groups that exist are dominantly based on religious ideologies and no reference was found that any of these movements focus on environmental issues or collectively on sustainability issues. Frank and Fuentes (1987: 150) stipulate the importance of such movements and organisations as agents for transformation. The lack of social groups and movements emphasises the lack of community leadership. Leadership from within the community is extremely important in unifying the community so that issues can be dealt with and supported collectively by the community as a whole.

Kayamandi has a lack of adequate care for toddlers and small children. Many parents send their children to makeshift crèches, which do not have the appropriate facilities or trained staff to care for the children. Appropriate facilities and trained staff, together with educational and social stimulation, are crucial for early childhood development. The township also has one primary and high school, which cannot cope with the amount of learners it has to cater for. This means that these children cannot get the appropriate guidance and learning necessary to do well in academic exams needed to obtain the necessary academic results to pursue tertiary education or further professional training.

It is evident that alcohol and drug abuse is widespread within the community and it is believed that these factors exacerbate criminal activity and other social issues. The aforementioned socio-economic factors are prevalent in most informal settlements throughout South Africa and are synonymous with unhealthy and unsustainable urban areas and human settlements. Additionally, the lack of adequate and effective service delivery in conjunction with lack of stakeholder engagement further compounds these socio-economic issues.

6.2.3. Infrastructure provision

It is clear that infrastructure provision is poor in Kayamandi. Many households still live in informal dwellings with limited access to water, electricity and waste removal. Road access to some parts of Kayamandi is in poor condition. There is also a huge backlog in housing

delivery in Kayamandi, which is aggravated by the lack of space for new housing developments. The isolated and fragmented nature of Kayamandi in relation to the rest of Stellenbosch and its economic activity is also regarded as one of the main reasons why economic growth and development is stagnant. Some argue (See Addendum 4) that this one of the key reasons why growth and development is stagnant in Kayamandi and that the provision of these facilities alongside the integration of Kayamandi into the rest of Stellenbosch will go a long way towards promoting development and sustainability in the community.

The lack of proper social facilities and infrastructure alongside good public spaces also limits social development and the formation of social groups and movements that foster community leadership and unity. This, combined with the poor infrastructure provision, creates an unhealthy urban environment and a poor investment climate. Additionally, this has led to divisions and tensions in the community, especially between the formal and informal areas of Kayamandi, due to some households having access to some facilities while others remain in the dark with limited access. These tensions are further fuelled by political and religious tensions within the community, creating a turbulent social landscape (See Addendum 4).

6.3. Governance

From the research it can be deduced that many of the governance constraints are visible within the Municipality and Kayamandi. Good governance for SD is required in all three spheres of government. In Kayamandi's case these constraints on good governance are still widespread and prevalent within public administration. Corruption remains rife and hampers the effective allocation of resources, while reducing transparency and accountability. Development in Stellenbosch seems to be exclusively focussed on the more affluent areas of the town, rather than gearing efforts towards areas in desperate need. There seems to be limited evidence of the co-management of resources between the public sector and private sector. The stringent enforcement of regulations alongside the use of effective incentives is also disregarded and is not evident within Kayamandi. There is also a lack of clear roles and responsibilities as well as an appropriate vision purpose and set of strategies. However, the municipality does place great emphasis on effective stakeholder engagement and participation and is well embedded in the IDP and SDF. However, stakeholder engagement and participation in Kayamandi is conducted through annual meetings or forums who voice

concerns. These forums represent a small minority of the settlement's residents and can thus not be regarded as effective engagement with residents.

Communication between the proponents of development and stakeholders are minimal. Feedback and objectives are communicated through forums and meetings between stakeholders (See Addendum 4). This can be attributed to the small size and lack of staff in the social development department at the municipality. There is no single communication network whereby all of the proponents (including the NGO's, the municipality, the university and the relevant stakeholders) can communicate feedback, results and objectives. It seems as if there is no common agenda that guides the implementation of development and SD initiatives. Engagement and participation is haphazard and requires a suitable and accessible framework as well as communication network.

The notion of poor communication and feedback loops are further visible due the lack of responsiveness from the municipality and proponents of development. It is almost impossible to contact the municipality or receive any meaningful feedback from them. The same can be said for some of the organisations in Kayamandi who did not respond to emails and phone calls related to interviews for the research. It reflects the poor communication between these organisations and general members of the community. Communication is fundamental in participation and ultimately addressing these concerns in a holistic manner.

6.4. The lack of clear-cut sustainability plans, monitoring, evaluation and assessments

The true success of developmental initiatives and sustainability plans can only be effectively measured through good monitoring and evaluation. Good monitoring and evaluation requires the selection of the appropriate indicators that allow progress or success to be measured. In the case of Stellenbosch and Kayamandi indicators should thus be chosen in line with: living within limits; equitable distribution, and; recognition of the interconnected nature of the world (The Cape Town sustainability indicators report, 2004: 2). Furthermore, sustainability within informal settlements falls within the realm of sustainable urbanisation to which Ndeke (2011: 16) argues that indicators should be appropriate for urban sustainability and should include economic, social, ecological, physical and political sustainability. Choosing suitable indicators is a prerequisite to prolonged success, but is however reliant on collectively establishing a common goal with ambitious objectives to work towards. Additionally, further

assessments such as SEA's, sustainability assessments and health assessments should be applied through which the progress and success of existing sustainability plans, policies and developmental initiatives are measured. These added measures will help further decision-making on sustainability within a specific geographical space.

The Stellenbosch municipality frequently refers to SD throughout many of its official documents and PPPs, as is the case on a national level, and yet there is no evidence of a sustainability plan with clear cut objectives specifically focussed in the municipal area of Kayamandi. A comprehensive plan is therefore required to act as framework for current and future development initiatives. The reality is that SD will continue to be ineffective, or even non-existent, without a plan that explicitly addresses sustainable development and makes provisions for sustainable practices and the management of resources. No sustainability objectives or targets are listed within any of the municipality's frameworks or management plans. There is also limited evidence of the municipality using specific indicators or indices in order to gauge progress and the success of existing plans. Indicators are meaningful in obtaining necessary feedback in order to measure the success of plans and programs associated with sustainable development. Indicators are also valuable tools for decision-makers to help ensure that the appropriate measures are taken in order to obtain results relevant to objectives.

Good governance and sustainability calls for effective and continuous monitoring and evaluation, but there seems to be little of this visible in reality and the plans and policies of the municipality. Limited evidence was found on any SEAs or any other alternative assessments apart from the traditional EIAs that have been implemented in Kayamandi. This implicitly shows the municipality's lack of commitment towards sustainable development in Kayamandi as well as the larger municipal area.

6.5. The lack of PPP implementation on a local level

Through a thorough analysis of several international as well as South African policies, plans and programs such, as the Constitution, NEMA, the Tenure Act, the Conservation Act, the Housing Act, Agenda 21, Breaking New Ground, the National Development Plan and the Stellenbosch SDF, several conclusions can be made. It can be deduced that there is a massive focus on rectifying past injustices from the apartheid era. The primary focus is on the poor

and previously disadvantaged. PPP aims to undo these injustices through SD, ensuring environmental justice, economic growth and employment generation, the provision of good quality housing, and by ensuring secure tenure and land rights.

NEMA and the Conservation Act places additional emphasis on environmental quality, the reduction of environmental degradation and sustainable development. This is also highlighted in Section 24 of the Constitution (The South African Constitution, 1996: 1251-1252) and the National Development Plan which calls for development which is sustainable by promoting employment and growth, moving towards a low carbon economy, reversing the spatial effects of apartheid, improving the quality of training and education, providing quality health care for all, building safer communities and transforming and unifying the nation (The National Development Plan, 2011: 12-25).

As has been mentioned before, the objectives of these PPPs and the unsustainable environment in Kayamandi are far removed from each other. Kayamandi's residents live in an environment which is harmful to their health and which is being broken down at a rate that cannot sustain current and future generations. NEMA states that the environment should be protected for the benefit of the people, and to serve social and developmental interests (NEMA, 1998: 14-15). However, in contravention of section 4 of NEMA (1998: 15-16), there is limited evidence of environmental protection, conservation or greening from which this community can draw, not to mention the adverse state of the biophysical environment surrounding the informal settlement.

Many households live in horrific makeshift housing units and government has not yet delivered on their promise to deliver adequate housing for the poor. Many residents do not have sufficient access to good food and water. It is thus clear that there are significant infringements on these people's basic human rights. Furthermore, in Kayamandi a number of legal contraventions continue to persist with regards to the housing act, land tenure act, NEMA and the housing act.

The municipality plans to implement a major housing delivery and development strategy in Kayamandi (see appendix 1). This plan, although admirable, is extremely ambitious and will be difficult to implement. However, this strategy vies for in-situ upgrading rather than green fields development and would see the provision of valuable infrastructure, such as access roads, water and electricity as well as good public spaces such as sports facilities, parks, social facilities etc. This plan can lay the foundation for future SD, but should be

accompanied by appropriate sustainability plans and initiatives in order to ensure a sustainable future. Locally, there is little evidence that the Stellenbosch municipality is implementing any of the interventions proposed by the NDP in order to promote development and achieve the vision for 2030. An ambitious plan like this could be the catalyst for a more comprehensive and concerted effort to promote SD, if done right.

The NDP and NSFD are guiding documents in South Africa in relation to our development trajectory and SD. The principles embedded in this document are in line with international literature with regards to sustainability science. The documents are fairly comprehensive and clearly identify problem areas that need to be addressed, and is backed by clear objectives for the years ahead. It makes sufficient provisions for key sectors that need to be addressed in order to achieve SD as well as how national government should approach SD. However, details on the effective local implementation of the document are few and far between and the means to achieving these objectives are not entirely clear. Another worrying observation is that there seems to be a lack of instruction on how these national plans can be translated and implemented at local level. Thus, there has to be a link established from national, to provincial, regional and local policy implementation. In essence, local implementation of the framework is yet to be seen. This reflects the gaps that exist between the three spheres of government with regards to feedback loops and communication as well as implementation.

South African policy is widely acknowledged for being progressive, innovative and inclusive. However, implementation has always been the main problem. Huge capacity deficits and financial restraints continue to exist in all three spheres of government that continually impedes the success of PPP. This is further exacerbated by corruption, nepotism and politics. Furthermore, as stated previously, the absence of appropriate indicators, frameworks and assessments drastically impedes good governance and the successful implementation, monitoring and evaluation of PPP. In order for SD to be successful these issues need to be addressed and these challenges need to be overcome.

6.6. The reactive and linear nature of developmental initiatives

Chapter 5 gave a brief synopsis of several of the organisations who enforce and promote development in Stellenbosch and Kayamandi. They have been referred to as proponents of development who promote development via initiatives or strategies that they implement in order to address social, economic and environmental issues that are prevalent in Kayamandi.

These change agents include Stellenbosch University, AmaZink Live, the Municipality and numerous NGO's such as Prochorus, Legacy Community development and Kuyasa.

The research has identified that in Kayamandi there is a significant lack of social movements or community groups that exclusively focuses on environmental issues or sustainability and sustainable development. There is also a considerable lack of greening initiatives and initiatives that address environmental degradation and sustainable resource use. The majority of NGO's are religious in nature and thus foster an immediate bias towards people from dissimilar religious beliefs.

The organisations in Kayamandi primarily focus on addressing social issues and ensuring social development, while doing little about economic development and environmental awareness. The scope of the developmental initiatives implemented by the NGO's focus on child and crèche support programs, literacy, training and educational programs for children and adults, disaster relief, community gardens and soup kitchens, health programs for HIV and AIDS patients as well as physical and emotional support programs for raped and abused women and children, and programs which enable individuals to participate in sports, arts and crafts.

However, the majority of these initiatives are reactionary rather than precautionary and preventive in relation to the issues they address and reflect the linear way in which institutions tend to address issues and promote development. Although these initiatives have changed lives and helped numerous people within the community, they have yet to address the root causes of the problems. They are outcomes-biased and do not address the process of change and true empowerment. For instance initiatives that focus on training and education might enable a person to find employment somewhere else, but not in Kayamandi, which often means that the person will leave Kayamandi and find residence somewhere else, closer to their place of employment. In essence, it might help someone individually, but it still doesn't address unemployment in Kayamandi and further fuels transience and migration. Also, if one takes Prochorus' local disaster relief initiative, it provides relief instead of helping households to prepare and avoid disaster. It also has no contingency plan for helping them to mitigate the effects of climate change.

The research has also found that the majority of these initiatives are externally funded, which creates a problem with regards to long-term sustainability. These initiatives remain dependant on outside help and funding and are not self-reliant. The NGO's mentioned in Chapter 5

have not identified a comparative advantage and have not use the available resources at hand to truly empower and enforce long term change in Kayamandi. Instead, they provide short-term relief rather than aid in long-term development and sustainability. Finally, little emphasis is placed on building leaders within the community who can enforce and promote change with regards to issues that the community feels are important.

Empowerment is about giving people a stake in their own development and building leaders who can mobilise the community in order to enforce development and change. The correlation that has been found between initiatives' and many of the proponents of development is the nature of external funding, reactive rather proactive development and, most importantly, the lack of emphasis placed on building leadership within the community.

6.7. Innovation and the Effective use of existing resources to promote SD

Whilst the projects such as the HOPE project has been instrumental in fostering initiatives that address SD, these initiatives have been implemented at an international scale and have focussed little on Kayamandi. A positive spinoff has been the partnership between the TsamaHub, Sustainability Institute and the Stellenbosch Municipality, which has implemented the Ishack Project and has been immensely successful thus far, even though it has only been implemented on a small scale in Enkanini. What the Ishack Project has done is use existing resources to create housing alternatives which are sustainable and empowering to the local community, while creating an environment which is better for the households' health and which reduces the environmental impact of the residents.

However, there was considerable tension due to residents wanting brick-and-mortar houses rather than "improved shacks". Additionally, it reflects the misunderstanding of the proponents of development considering political, religious and other tensions and divisions between community members as well as other parts of Stellenbosch. These divisions and tensions can drastically impede SD and the success surrounding developmental initiatives. These misunderstandings reflect the lack of stakeholder engagement and participation with the community. Alternatively, strong leadership within the community was required to engage with the proponents of development to collectively voice the concerns of the community and to find a suitable course of action that is beneficial to all interested and affected parties. Appropriate participatory processes would have highlighted these concerns and issues before hand. However, the project illustrates how innovation can be used to

provide alternatives to informal settlement upgrading while empowering the community and ensuring sustainable development, something the municipality as well as the NGO's can learn from.

The Greater Stellenbosch Development Trust, while also externally funded, has at least stimulated some economic growth and development in Kayamandi through some of its funding initiatives. SOS provides businesses in Stellenbosch and Kayamandi with sound business advice through financial management, planning, monitoring and marketing. This is an extremely helpful tool for small businesses and their development, and can create a valuable platform for small business development in Kayamandi. AmaZink Live can be used as an example of a small business which is now sustainable and which provides significant income for Kayamandi-residents through tourism activities. AmaZink is also a source of employment for residents and has given community members a platform where they can showcase their talents and become leaders and role models within their community. AmaZink's success has created a demand for other initiatives, such as security companies and tour guides, a demand which residents have identified and used as an opportunity to generate income and provide additional employment for other members of the community.

Cloete (2009: 307) suggests that current systems within municipalities and their associated monitoring and evaluation systems do not have a formal hierarchical structure, but operate within the form of a loose network of autonomous agencies periodically interacting with one another. There is no clear line of authority in these systems, and frequent turf battles cause confusion and conflict among stakeholders. This is evident in Kayamandi, is apparent in the poor communication between proponents of development and stakeholders, and reflects the lack of a clear-cut sustainability plan with a suitable monitoring and evaluation framework embedded within the plan.

6.8. The lack of municipal innovation

Through analysing the municipality's IDP and SDF, the research has found that significant emphasis is placed on participation and stakeholder engagement that is facilitated by the IDP. The research has identified that the municipality has identified five key priorities:

- Institutional capacity;
- Municipal transformation;

- Local economic development;
- Good governance and;
- Financial viability and management, through which it aims to transform the municipal area and promote development.

The municipality's vision is to be the innovation capital of South Africa, yet it shows little innovation with how it approaches development and the associated challenges. It has vowed to endlessly review the implementation of systems and procedures, but no evidence can be found on how this is done in Kayamandi or the rest of Stellenbosch in order to promote SD. The municipality's strategy with regards to fulfilling its vision rests on five pillars:

- Preferred investment destination;
- Greenest municipality;
- Safest valley;
- Dignified living and;
- Good governance and compliance (Stellenbosch IDP, 2014: 12).

The research clearly highlights the numerous shortcomings with regards to the overarching strategy and yet again little evidence can be found on how Stellenbosch aims to achieve each of these objectives.

The municipality remains behind in service delivery, especially in Kayamandi, and there remains a backlog in housing delivery. However, a recycling programme has been successfully implemented in all of the wards. The construction of the Kayamandi sports complex has also addressed several small business axes and is regarded as a catalyst for small business growth and tourism development alongside the Kayamandi tourism corridor project.

The IDP (2014: 58) further identifies several key problem areas in Kayamandi that need urgent attention. Emphasis is placed on the need to appropriately integrate Kayamandi with the rest of Stellenbosch. It recognises the shortage of space for new housing development which further tilts the housing debate in favour of in-situ upgrading. Additionally, electricity, waste management, community safety and health have also been identified as key problem areas. The municipality has also recognised that a taxi rank and operational community centre is fundamental in promoting economic growth and incorporating the local citizenry into social and economic activities in the municipal area.

Table 6.1: Research Objectives and Research Findings

Research objectives and Findings	
1. Analyse the proponents of development and their developmental initiatives and programs in Kayamandi with the aim of identifying why they have not yet effectively promoted sustainable development.	The research has indicated that the majority of initiatives have been too reactive and linear in addressing long-term development needs and sustainability.
2. Identify the missing links and give meaningful feedback or recommendations on how national policy can be better realised and implemented as well as how the relevant proponents of development can ensure sustainable development.	There is a lack of what can be deemed as good governance. This is reflected by the poor policy implementation at a local level. Public and private organisations have not been innovative enough in the way they approach development. The lack of leadership is evident in way in how initiatives have not fostered sustainable development.

6.9. Conclusion

This chapter aimed to present the findings of the research, which was obtained through the literature review, a review of PPP and other qualitative research methods. It has indicated a wide variety of issues that needs to be addressed as well as several problem areas that have to be dealt with by the municipality alongside the other proponents of development with regards to how development is approached in Kayamandi.

The most significant missing component with regards to the shortcomings of SD in Kayamandi can be attributed to the lack of policy implementation on a local level by the municipality. First, it is the municipality's lack of commitment towards SD by not designing and implementing a suitable sustainability plan with clear cut objectives, roles and responsibilities. Secondly, the lack of indicators within a framework accompanied by strategic assessments indicates that there is a lack of commitment towards SD and obtaining the goals and objectives set out in national policy and plans. Thirdly, the turbulent nature of the community, its internal tensions and divisions, reflects the lack of community leadership that is also disregarded by the proponents of development.

Additionally, the research has identified that Kayamandi is subject to a wide variety of social, economic and environmental issues alongside infrastructure deficits which is exacerbated by a highly transient population, lack of secure tenure, illegal and subpar housing. A number of factors remain which impedes the quality of governance and policy implementation which reflects the current state of affairs in Kayamandi and why development is sub-standard and lagging behind the rest of Stellenbosch. Strong leadership is needed to unify the community and through which change can be stimulated, but the value of creating strong leadership within the community has not been realised and evidently means that initiatives will not succeed in truly empowering the community and creating an enabling environment for SD.

That which has been successful in Kayamandi has been due to the fact that it has recognised the gaps in the market and the comparative advantage of the community. It has also succeeded because it has given community members a stake in something, something to be proud of and something they can enjoy. True progress is achieved when development is built on what exists physically and emotionally within the community and thus developmental initiatives should use and pursue this.

Chapter 7: Recommendations & Conclusion

7.1. Introduction

The focus of this thesis was to critically analyse and identify why development and sustainability in informal settlements such as Kayamandi is close to non-existent. National and local PPP call for and make wide use of the concept of SD, but in reality this is not being realised in any meaningful manner. As part of a town with significant social and financial capital, Kayamandi has no reason to still suffer from apartheid legacies and failed development initiatives. From the findings discussed in the previous chapters, appropriate recommendations will now be given in order to ensure that the objectives stated in PPP are met.

The aim of this chapter is to give valid recommendations to bridge the gap between the current state of affairs and that that is stated in PPP. The recommendations will address issues regarding good governance, policy implementation, service delivery, the lack of leadership and the lack of an appropriate sustainability plan.

7.2. Recommendations

7.2.1 Promote and Ensure Good Governance

Good governance is the link that ties the three pillars of SD together and therefore should precede any plan or strategy regarding SD. The research has indicated that governance in Stellenbosch is still some distance away from being regarded as “good”. Thus, an environment should be created where good governance can exist and flourish, which will ultimately ensure SD. It is clear that government on all three tiers should strive towards good governance, as without it there is little chance of making SD a reality. In addition, Hubbard (1999: 40-43) argues that good governance also enables and safeguards an integrated democracy, is value based and globally sensitive. It also enables performed participation throughout communities, is consent based, explicitly integrates human considerations, and learns and enables learning.

Effectively good governance rests on 4 key principles:

- Accountability;
- Participation and decentralisation;
- Transparency and;

- Predictability.

In Stellenbosch, officials have to be held accountable for not delivering the results promised by and achievable through policy implementation as well as service provision and housing delivery. Thus far, they have not been held accountable for not delivering on what is promised within PPP. Local governance also remains somewhat centralised and is remnant of traditional methods of governance which have failed to deliver results historically. Through implementing appropriate and effective incentives and regulations within the municipality that address accountability, performance, delivery and transparency officials can be motivated to deliver on predetermined objectives stipulated in PPP. This will deter ineffective management of public resources while improving transparency and accountability.

The pervasiveness of corruption and corrupt acts in South Africa, not excluding the Stellenbosch municipality, is a grave national concern, something that drastically impedes accountability and transparency, and has adverse effects on service delivery. Stellenbosch municipality's transition towards good governance requires that corruption has to be adequately dealt with. The occurrence of corruption in South Africa can be attributed to undesirable social controls, antiquated laws, excess demand, entrepreneurial politics, bureaucratisation, excessive discretion and defective administrative arrangements (including inadequate controls). It is generally accepted that a successful campaign against corruption demands the full participation of all sections of society, including most importantly civil society and the business community. Pillay (2004: 589-590) argues that corruption can be curbed through several institutional and regulatory measures, but is however dependent on the creation of strong leadership alongside active participation.

By taking a more stringent stance on corruption in the municipality corrupt act and officials can be significantly reduced. This can be done by promoting whistle blowing whilst ensuring that the law protects whistle blowers. More stringent penalties should be put in place for officials who are corrupt. Reducing corruption and improving governance is also dependant on good leaders and managers within the public sector.

Good governance can be achieved by:

- Supporting democratisation;
- Promoting and protecting human rights;
- Reinforcing the rule of law and the administration of justice;

- Enhancement of the role of civil society and its capacity building;
- Public administration reform and better management of public finances;
- Civil service reform;
- Local government reform;
- Capacity building and;
- Decentralisation (Bosselmann, Engel and Taylor, 2008: 67-70).

Civil service reform programmes are crucial towards improving governance. Such programmes are generally associated with a wide range of personnel management and compensation reform initiatives in addition to staff training and management. This needs to be accompanied by more rigorous and transparent policies with regards to the selection of personnel as well as their promotion and assignment to positions. This would significantly reduce the occurrence of nepotism and clientelism in the public service sector (Mekolo and Resta, 2005: 40).

In Stellenbosch, decentralisation can occur by making effective use of co-management strategies alongside public-private partnerships. The local municipality should make increasingly more use of private-public partnerships, especially with regards to housing development and infrastructure delivery. The use of such partnerships leads to the decentralisation of local government and leads to greater transparency and accountability. It enables the sharing of valuable knowledge and capacity between the private and public sector, whereas co-management creates a sense of ownership and social responsibility.

Additionally, the poor communication and feedback loops between proponents and stakeholders can be curbed by making use of effective multi-stakeholder dialogues (MSD's). This should be accompanied by a framework in which participation and engagement should occur. This framework should be supplemented by an effective network of communication between all relevant parties and stakeholders with the aim of presenting feedback and communicating issues, objectives and challenges. The use of co-management alongside MSD's, participation frameworks and communication networks, would significantly improve transparency, accountability and participation while ensuring that officials are held accountable and responsible for not delivering on pre-defined and communicated objectives. This would resemble governance through networks rather than through a hierarchical structure.

However, the involvement of active political bodies and civil society pressure groups are also required and should be accompanied by a judicial system that is fair and reliable. Good governance also calls for an appropriate vision purpose and set of strategies, which should be set out in the IDP, accompanying official municipal documents as well as the subsequent plans and frameworks for sustainability. The strategy should also highlight the roles and responsibilities of officials clearly in order to enforce accountability while delivering results.

Officials should respect human rights as expressed in the Bill of Rights as well as other national policies. Stakeholders should in turn also be aware of their own rights, which emphasises the need for open access with to information surrounding decision-making as well as legal rights. This will significantly improve transparency and accountability regarding decision-making and the implementation of plans that affect Kayamandi. Ensuring good governance will go a long way in curbing the negative social, environmental and economic dimensions in Kayamandi, and it will go a long way in transitioning the community towards a more sustainable future.

7.2.2. Improve Policy Implementation

It is clear that poor policy implementation in South Africa in all three levels of government is a significant issue, which has to be dealt with in order to ensure that policy objectives are met and development is sustainable. Poor policy implementation can be attributed to:

- The absence of effective implementation strategies;
- Corruption within procurement processes;
- Poor monitoring and evaluation mechanisms;
- Inadequate government involvement;
- Unmonitored project managers and public officials;
- Shortage of staff;
- Lack of resources;
- Limited capacity and;
- Political interference (Magoro and Brynard, 2010: 14-18).

It is evident that there are huge gaps between policy and the reality within Kayamandi. Stack and Hlela (2002: 70) suggests that these gaps between policy and implementation can be attributed to a lack of political leadership, lack of a detailed strategic plan, the failure to

calculate cost implications, weak policy making bodies, lack of relevant statistics and research data to inform policy, ineffective consultation and communication on policy, lack of co-ordination between spheres of government, poor management and lack of capacity. In addition, Pretorius and Schurink (2007: 23-25) argue that poor service delivery for local municipalities can be due to the following: no clear distinctions between functions; tedious procedures; lack of funding and human resources and; poor communication.

Municipal service delivery is governed by the IDP and the performance management system; intergovernmental relations; the expanded public works program, the budget; policy and procedure (Pretorius and Schurink, 2007: 22). The implementation of policy by Stellenbosch municipality in Kayamandi can be improved through a number of measures. The fostering of strong political leadership within the community alongside the use of a detailed strategic plan with clear cut objectives, roles and responsibilities would drastically advance the implementation of policy. In addition, policy implementation can be improved by obtaining quality data and statistics that can be retrieved from appropriate indicators and indices alongside community feedback (Stack and Hlela, 2002: 70).

Pretorius and Schurink's (2007: 25) research clearly showed that the key to improving service delivery is the transformation of the institution and re-organisation of powers between the District Municipality and the local municipalities. Magoro and Brynard (2010: 19) support their argument, stating that policy implementation can be improved by:

- Clearly defining roles and responsibilities;
- Instating more effective implementation strategies;
- Giving effect to the rules, procedures, instructions, policy statements and other written instruments of the municipality;
- Improving capacity within state organs, especially at a local level;
- Getting local government to play a facilitative role;
- Clearly defining responsibilities and expectations for officials and contractors, alongside the effective monitoring and evaluation of progress and;
- Implementing rigorous systems which ensure transparency and accountability and which iron out corruption in all phases of implementation and delivery.
- By implementing mechanisms, procedures and processes for minimising cross-referrals and overlap of responsibilities between officials as well as for reducing disputes.

In essence, the lack of policy implementation in South Africa is largely due the lack of capacity. Thus, capacity has to be improved. Capacity can be improved by employing individuals who have the appropriate training, skills and experience to do the job. This should be accompanied by continual training and advancement within the public sector to ensure that officials have the capacity to perform their jobs as civil servants. Once again, strong leadership and management is a strong component of improving capacity within the public sector. By stating a clear objective for municipality to work towards and accompanying this with clear roles and responsibilities for each public official, should significantly improve efficiency and delivery. Improved efficiency and delivery will mean that fewer resources are used in obtaining set objectives. This translates into improved policy implementation at a local level.

7.2.3. Service Delivery & Housing

Poor service delivery is a product of poor policy implementation and poor governance. The evidence suggests that there is severe lack of service delivery, especially in some of the more informal parts of Kayamandi. The provision of service will no doubt improve if good governance is enacted alongside the improvement of policy implementation. Still, it is important to deal with service delivery as a recommendation on its own. Improved service delivery should not be done strictly as a means to an end, but should be seen as an opportunity whereby SD can already be incorporated into planning and development. This can be done by making use of sustainable strategies and mechanisms, which will further be enhanced by additional sustainability plans and developmental initiatives.

	Access				Satisfaction			
	Question	Yes	No	Rank	Question	Yes	No	Rank
Crèche	50	68.1	24.8	11	66	60.9	24	12
Primary school	51	80.3	15.5	14	67	75.7	14.8	16
Clinic	52	74.7	21.4	13	68	66.4	24.3	11
Post Office	53	53.8	42.3	7	69	52.7	36.1	8
Community Hall	54	66.7	27.6	9	70	61.8	26.7	10
Shops	55	83.7	14.3	16	71	79	16	15
Home shops	56	73.3	22.5	12	72	69.6	21	13
Bus service	57	17.9	75.3	1	73	21.7	58.8	1
Taxi service	58	81.6	14.6	15	74	72.7	18.7	14
Sport facility	59	69.4	26.4	10	75	62.1	29	9
Recreation facilities	60	40	54.4	4	76	36.6	49.7	3
Old age care	61	29.7	62.4	2	77	27.5	52.5	2
Library	62	53.8	42.6	6	78	52.4	37.3	6
Municipal offices	63	40.8	54	5	79	39.1	47	5
SAPS/law enforcement	64	59.8	37.4	8	80	53.7	36.9	7
Fire brigade	65	38	57.7	3	81	38.5	48.3	4

Table 7.1: Access and Satisfaction to basic services in Stellenbosch Municipal Area (Social Survey, 2005: 5).

The table above clearly illustrates Stellenbosch Municipality's citizenry's access and satisfaction to basic services and amenities. There is a lack of access to the post office, a community hall, a bus service, recreational facilities, old age care, municipal offices and a fire brigade. Furthermore, there is a lack of satisfaction with the bus service recreational services and old age care. These issues should be adequately addressed alongside the provision of housing in informal settlements as it would go a long way in establishing a platform for the creation of community leadership and ultimately sustainable and integrated human settlements.

7.2.3.1. Housing

It is clearly evident that there is a need for adequate and formal housing in Kayamandi and the municipality also suffers from a huge backlog in housing delivery. Moreke (2009: 15-19) argues that backlogs in housing delivery can be attributed to:

- Land tenure and location issues;
- Financial constraints for housing;
- Urban-rural imbalance and;
- National housing complexities.

This is supported by the realities in Kayamandi as it is well known that land tenure along with the transience of residents has impeded housing delivery. This, alongside the lack of

appropriate space for new housing developments, builds a case for in-situ upgrading rather than other strategies for housing delivery. This also exacerbates why more innovative private-public partnerships such as the Ishack project should be pursued in order to provide suitable in-situ upgrading options, which can be utilised by the municipality. Such partnerships mean that capacity is shared between the private and public sector, addressing the capacity deficits that exist in the Stellenbosch Municipality. The delivery of adequate housing for all in Kayamandi will drastically reduce tensions between the formal and informal sections of the community. However, the delivery should be accompanied by secure tenure and good appropriate housing units. Housing should be in line with NHBRC requirements while design should reflect stakeholder participation. In addition housing should make use of technologies that promote sustainability, similar to those used by the Ishack project.

Housing delivery or in situ upgrading should utilise innovative technologies that reduce the carbon footprint of the community from the outset. These technologies would also reduce households annual spending on fuels for heating etc. while reducing the risk of health related issues by using fuels such as paraffin for heating and cooking. Odendaal and Morar (2013: 1-7) state that the literature validates clear international support for increased efficiency, with household efficiency savings being a key sector for demand reduction. This can be done through several retrofitting measures that can be incorporated into low-cost housing design. Measures will improve efficiency; reduce environmental impacts whilst improving the household's standard of living. Measures include: insulated ceilings with recycled materials, solar geysers, rainwater-tanks, food gardens and Wonderbags. Such technologies will significantly improve efficiency while reducing the carbon-footprint and resource intensiveness of housing units.

7.2.3.2. Service Delivery

Service delivery remains a huge issue in Kayamandi. The research also suggests that the lack of infrastructure is a huge constraint towards the ultimate sustainability of the community. The lack of infrastructure has meant that water bodies are frequently polluted by sewerage or by the illegal disposal of household waste, which are direct contraventions in terms of the Conservation Act (1989) as well as NEMA (1998). In addition, the lack of proper road access alongside other facilities has hampered economic growth and development in the area.

Service delivery in South Africa and in Stellenbosch can be improved through a variety of mechanisms. By building partnerships for delivery, this implies the need to develop an effective communication and information gathering system as a basis for informing decision-making and building partnerships for delivery. By putting the basics in place, this implies appropriate regulatory and operational systems that will facilitate access and support delivery. Plan, act and review, this implies putting actions into place and then reviewing them. By being realistic about what can be done, this implies working around resource limitations by recognising what the limitations are (Mc Lennan, n.d: 20).

Infrastructure development should not only be seen as the provision of roads, water, and electricity and refuse removal. It should include social facilities such as schools, community halls, places of worship etc. The municipality should recognise the importance of providing such facilities alongside the provision and development of good public space. The provision of infrastructure is directly linked to good governance and the effective management of resources. Providing improved infrastructure to Kayamandi will significantly reduce detrimental environmental impacts, but most importantly it would stimulate economic growth, activity and investment. This will have positive knock-on effects on the social dimension of the community.

7.2.3.3. Public spaces and urban integration

Stellenbosch municipality has a responsibility towards its citizenry to provide good public spaces in Kayamandi. A good public space not only ensures a happy citizenry, it also has a key role in developing social actors and leadership in a community. Creating social actors is instrumental in moving citizens to higher levels of social action and community leadership. Social action and leadership within a community promotes volunteering, the raising and solving of local concerns, state engagement, holding state officials accountable, the sharing of power, improved decision-making and improved responsibilities of citizens (Macdonald, 2011: 16-19).

Good public spaces can be a several things, and the creation of such spaces can serve several purposes. Good public spaces stimulate citizen engagement, with one another and with the civil service and public sector. Public spaces play a vital role in the social and economic life of communities, it stimulates economic activity through the occurrence of traditional markets and areas of trading (Warpole and Knox, n.d: 1), and help build a sense of community, civic

identity and culture. Public spaces facilitate social capital, economic development and community revitalisation. Healthy, attractive, active, well-functioning public spaces can jumpstart economic development in a community (UN Habitat, 2012:1).

Public space can range from high streets, street markets and shopping precincts, to community centres, parks, playgrounds and neighbourhood spaces in residential areas (Warpole and Knox, n.d: 2). UN Habitat states that urban space and place-making can be improved in several ways:

- Improving streets as public spaces;
- Creating squares and parks as multi-use destinations;
- Building local economies through markets;
- Designing buildings to support places and;
- Linking the public health agenda to the public space agenda (2012:7-11).

Housing delivery and place-making initiatives enacted through the implementation of Agenda has had significant success in rejuvenating communities while promoting development (See the Traditional Medicine and Herb Market in the Warwick Junction neighbourhood of Durban, South Africa).

Agenda 21 also emphasises the need for urban integration, and Stellenbosch municipality recognises this within the IDP. Similar to other informal settlements, Kayamandi is situated in a peri-urban area. This means that communities within it are often situated far away from economic activity or employment opportunities. Consequently there is a significant lack of economic opportunities within Kayamandi, which is compounded by the lack of public transport to and from the community. The IDP states that it aims to provide a taxi-rank in Kayamandi and that it will integrate Kayamandi with Cloetesville and the Greater Stellenbosch town. This is of great importance, but should be accompanied by other, less carbon-intensive, transport initiatives. The provision of housing, improved service delivery alongside place-making and public transport initiatives will set the tone and create a stimulating environment for investment, growth and development.

7.2.4. Create a positive and enabling environment and platform in which SD and initiatives can flourish

The literature clearly illustrates the importance of knowledge and leadership in creating an enabling environment for growth and nurturing SD. In Kayamandi the lack of leadership is reflected in the lack of unity and increasing tensions within the community. By building both public and community leadership along with knowledge will create an enabling environment and platform in which the proponents of development can seek to promote and secure SD.

7.2.4.1. Recognise the Importance of building community leadership

Leadership can be referred to as a process of influence that occurs within the context of relationships between leaders and their collaborators that involves: establishing direction (shared vision); aligning resources and; generating motivation and providing inspiration. Leadership comes from the passion of the change agents and identifying who those agents are becomes very important. Building a network of committed leaders at all levels is a strong first step towards change. Change only takes place when there is a critical mass. Leadership from below can work, but the power levels above need to become surrounded in order for the most intransigent to move. It is far better to have leaders near the top of the organisation, linked to enthusiasts throughout, driving change. Producing change is about building leadership and also management. In most instances, there is an overwhelming emphasis placed on building management rather than leadership. We continue to produce great managers; we need to develop great leaders.

Corporate sustainability researchers stress the need for ‘top-down’ (usually formal) and ‘bottom-up’ (usually emergent) leadership to drive change. Grooms and Reid-Martinez (2011: 414) argue that sustainable leadership plays a crucial role in facilitating SD because: it creates and preserves sustained learning; secures success over time; sustains the leadership of others; addresses issues of social justice; develops rather than depletes human and material resources; develops environmental diversity and capacity, and; undertakes activist engagement with the environment. The proponents of development in Kayamandi should utilise public private partnerships in order to foster sustainable leadership within the community. In summary, such leadership practices give leaders the ability to recognise the intricate and complex systems interwoven with human values that promote sustainability.

However, the building of leadership is a complex and lengthy process, but should not be ignored as driving factor for SD advancement. The proponents of development should implement initiatives that enable this process and should be facilitators of greater community and public leadership. The leadership learning process can become the space where conflicts and losses are processed and requires: that reconciliation and forgiveness is achieved between community members; that reflections about spirituality as a dimension of human beings takes place; that spirituality manifests itself through the exercise of values; leadership based on values is practiced on personal and community levels; that leaders must have best skills and tools to manage their communities efficiently and; that through the motivation of participation, enriched discussions on diverse topics will be made (Galdos et al., 2008: 15-17).

The creation of leadership is clearly an important facet in ensuring SD. Community leadership should be accompanied by strong public leadership, such leadership genuinely adds public value. Value is added in three ways: addressing market failure; building resilience, and; renewing the social contract. Birney et al. (2010: 13-17) argues that public leadership can be created by explicitly expressing objectives; building networks; linking policy to delivery; share learning; by creating a culture of learning; improving public engagement skills; hardwiring sustainability into all processes and; by innovating across all spheres.

The creation and development of leadership should focus on personal leadership development while incorporating knowledge of eco-tourism, conservation concepts, responsible living and social responsibility. Personal leadership development is dependent on self-knowledge and life skills. Self-knowledge encompasses personality, values, multi-intelligences and aptitudes; while life skills rest upon communication, goal, setting, decision-making, conflict management and reflection (www.afel.ac). Improving self-knowledge and life skills will stimulate personal leadership development which will ultimately build greater community leadership.

7.2.4.2. The importance of knowledge in fostering SD

Good leadership is co-dependant on improved knowledge training. Thus, initiatives should be increasingly focussed on the development of knowledge through learning and access to information. Al-Roubaie (2013: 5-10) insists on the importance which knowledge plays as a

key determinant for building capacity to sustain development. This dynamic process is however reliant on information and learning as well on the investment of knowledge creation. Knowledge enhances individual and community capabilities, fosters improved participation in decision-making processes and creates an enabling environment for creativity and innovation.

By promoting strong leadership through increased access to and use of knowledge means that skills are gained that enable the application and absorption of ideas and technologies while empowering people's capabilities to understand the process of knowledge creation and innovation. Knowledge creation has several other subsequent benefits that further promote good governance and sustainability. Improved knowledge means improved policy-making bodies, improved communication and consultation processes, as well as improved capacity. These elements are required in order to improve policy implementation (Stack and Hlela, 2002: 70).

Hawkes (2001: 12) argues this: *"A sustainable society depends upon a sustainable culture. If a society's culture disintegrates, so will everything else [...] [V]itality is the single most important characteristic of a sustainable culture. Cultural action is required in order to lay the groundwork for a sustainable future [...] [T]he initial strategies that need to be implemented to successfully achieve sustainability must be cultural ones"*. Strong leadership and knowledge fosters a culture of sustainability and he regards this as the fourth pillar of SD.

The proponents of development listed in Chapter 5 alongside the public sector should actively try to implement initiatives and programs within Kayamandi which builds leadership and knowledge. Knowledge and leadership should enable community members to proactively address concerns rather than reactively. If knowledge is available on why environmental, social and economic issues exist within the community, leaders will actively use this knowledge to find innovative and inspiring ways to deal with these issues. This creates an enabling environment for SD. Additionally; if the appropriate mechanisms, feedback loops and methods of communication are implemented by the municipality it will make it so much easier for these leaders to voice personal and community concerns and to use their innovative ideas to address these issues alongside the proponents of development.

7.2.5. Develop an inclusive and holistic plan

7.2.5.1. *Design and implement an appropriate Sustainability Plan/Framework*

There is no single formula or answer to the sustainability challenge. However, creating a written sustainability plan will provide a road map of sorts to guide decision makers and stakeholders towards sustainable development. The process of creating a written sustainability plan can also strengthen partners' and stakeholders' buy-in and understanding of the efforts needed in order to promote sustainability and equitable growth and development.

A sustainability plan can help identify what resources are necessary to achieve pre-determined objectives, encourage the development of partnerships and support collaboration, and help define progress and the necessary action steps needed to ensure the long-term success of developmental initiatives and programs. Engaging in sustainability planning provides an opportunity to map out how decision makers can maintain valuable projects and innovations in a changing environment. In essence, a sustainability plan is the fundamental theoretical point of departure needed in order to move towards a more sustainable future. However, the sustainability plan should reflect the desired nature of the community as a collective and a clearly defined goal for the future.

The formulation of such a plan is however a daunting prospect. A sustainability plan should be built on and informed with meaningful and effective participation process and stakeholder engagement. Various assessments can be employed in this regard in order to gain sufficient data and input from all of the affected and interested parties. A strategic environmental assessment is a perfect tool which can be utilised in order to estimate why policy has failed to promote sustainability.

The sustainability plan should be in line with existing PPP and should not be seen as a separate entity. Instead it should reflect the principles and objectives stipulated in the IDP, SDF, and NDP etc. The sustainability plan should be seen as a tool whereby policy objectives related to sustainability can be achieved on an on-going basis. Using suitable assessments, analysis methods, stakeholder engagement processes and indicators to inform and guide the sustainability plan while incorporating the sustainability plan into existing municipal planning and management documents such as the IDP and SDF will go a long way towards promoting sustainability in Kayamandi.

The larger municipal area wherein Kayamandi is situated includes other towns such as Pniel, Franschoek and Klappmuts. Each of these towns has their own peripheral informal settlements (See Appendix 1). Thus, it will be foolish to address only Kayamandi's sustainability needs. The municipality must develop a comprehensive and holistic sustainability framework which addresses SD in the entire municipal area. However, each town and each informal settlement faces its own set of unique challenges and issues and therefore a single plan for all of these entities will fail to provide the necessary action needed to promote SD. A sustainability plan should be designed and developed from the municipal sustainability framework for each of the separate entities in the municipal area. Each plan should use its own set of indicators and should stipulate their own aims and objectives in relation to the issues that area faces. Subsequently, the plan and larger framework should be derivative and in relation to the National Sustainability Plan and The National Framework for Sustainable Development.

The lack of a common agenda between the public sector, stakeholders and proponents of development is clear in Stellenbosch and Kayamandi. Each entity is currently serving its own agenda, with its own aims and objectives. The development of an inclusive and holistic sustainability plan will go a long way towards securing SD in the municipal area and Kayamandi. This will form a collective agenda for the municipality with common goals and objectives to work towards.

The benefits of developing a sustainability plan will far outweigh the costs of not doing so. It can be seen as a useful tool for local governments seeking to move towards a more sustainable agenda while serving as a useful tool for jurisdictions that want to package all of their measures and interventions under a single umbrella. Creating a written sustainability plan will provide a road map for the municipality, partners and stakeholders towards sustainability efforts. The process of creating a written sustainability plan can also strengthen stakeholder and partnership buy-in. Many local governments have already implemented a number of environmental and energy saving programs, often on a one-off basis. However, they often lack a single framework for measuring the impact of their programs. A sustainability plan provides a means of incorporating all relevant considerations under a single set of goals and metrics (Erwing and Knapp, 2009: 5-6).

An integrated and holistic sustainability plan is instrumental in addressing a set of environmental, economic and social equity goals. In addition, it takes into account the interrelated issues of climate change, population change, land use, infrastructure, natural

resource management, quality of life, public health, and economic development (Erwing and Knapp, 2009: 8). Community sustainability planning is about transformative change alongside incremental improvements. It encourages a new way of thinking, making decisions and collaborating. It is a long-term process that requires leadership, shared commitment, hard work and sustained effort (Park, Purcell and Purkis, 2009: 13). Creating such a sustainability plan involves the integration of economic and social perspectives into the quality of place (the ecological imperative). The integration of these imperatives into a single plan over a long term perspective is a critical step on the road towards achieving community SD (Ling, Dale and Hanna, 2007: 1).

The development of a sustainability plan involves 5 key phases or milestones:

1. Conduct a sustainability assessment
2. Establish sustainability goals
3. Develop a local sustainability plan;
4. Implement policies and measures
5. Evaluate progress and report results (Erwing and Knapp, 2009: 27-44).

With regards to Kayamandi, Stellenbosch municipality has to design an integrated community sustainability plan. This plan should be derivative of existing municipal plans and documents such as the IDP. It can be used as a framework to guide the process of identifying policies to incorporate into an existing municipal plan. Using such an integrated plan can be seen as a holistic way of integrating sustainable considerations of each community into the entire municipal area's planning agenda (Park, Purcell and Purkis, 2009: 13). Ling, Dale and Hanna (2007: 2-4) continues by arguing that the creation of such a plan involves four key stages: the pre-planning stage; mapping the community; engaging the community and; the creation of a framework for future development and change. However, a fifth stage should be added to this process, which requires the monitoring, evaluation and continual review of the plan.

7.2.5.2. Use appropriate indicators and indices alongside suitable assessments

The implementation of such a plan will go a long way towards promoting SD. However, its success relies on effective monitoring and evaluation. Systematic monitoring and evaluation is the main tool to achieve effective evidence- based policy analysis goals.

Policy monitoring is the regular, systematic collection of data on the basis of specified indicators to determine levels of progress and achievement of goals and objectives. Policy evaluation is the systematic judgement or assessment of policy programmes. It can include a systematic assessment of resources, organisational processes to convert such resources into policy outputs or products, and the determination of the extent to which these policy programmes have the intended results in the form of outputs, outcomes or impacts, measured against envisaged goals and objectives (Cloete, 2009:295).

Effective monitoring and evaluation requires the use of a specific set of appropriate indicators, which addresses issues regarding informal settlements and urban sustainability. Indicators should be placed within indices, which would act as a framework that would continually monitor results and policy outcomes. The use of other assessments – focussed on sustainability, health, social impact, among others - should be used prior to implementation in order to identify problem areas. They should also be used during and after implementation in order to gauge the success surrounding policy objectives. The use of indices and assessments serves as meaningful source of feedback, which can then be used to guide further and future policy making and decision-making.

7.2.6. Implement unbiased proactive and innovative initiatives, which address the triple bottom line of sustainability

NGO's and other proponents of development play an important role in promoting SD within communities. It is evident that there is a lack of coherence and communication between the various proponents of development. This would effectively be altered by a sustainability plan or framework. Still, many of the organisations who act as change agents in Kayamandi have implemented a number of initiatives which are reactionary rather than preventative. There is a need for proactive thinking and innovation with regards to initiatives. Initiatives should be undertaken through partnerships and through the co-management thereof. The five dimensions of sustainable community development are as follows:

- Increasing local economic diversity;
- Self-reliance: development of local markets, local production, local processing, greater co-operation among local economic entities;
- Reduction in the use of energy combined with recycling and management of waste products;

- Protection and enhancement of biological diversity and stewardship of natural resources and;
- Commitment of sustainable communities to social justice (Bridger & Luloff, 2001).

Thus, if the overarching strategy of the municipality is to ensure a sustainable community then it, alongside the proponents of development should design and implement initiatives which address each of these five dimensions. This will ensure that the community is proactively moving towards a more sustainable future.

The literature also reiterates the need for strong leadership and the validity thereof in securing SD. Thus, proponents of development should work together in creating an enabling environment, while playing an active facilitative role in building knowledge and leadership within the community. There is also a significant lack of initiatives that collectively address the triple-bottom line of sustainability. This reflects the lack of innovation and knowledge with regards to designing appropriate proactive initiatives. If the proponents of development focus on building leaders within in the community and providing sufficient knowledge regarding pressing issues while also designing initiatives that address the five dimensions of sustainability then they have succeeded in creating an enabling environment for SD.

There is room for innovative thinking in Kayamandi, which can be deemed as a perfect arena to test innovative new ideas. This can be attributed to the relative small size of Kayamandi and also the incredible amount of human capital and resources in Stellenbosch. Initiatives have been limited in creating a sense of ownership and something to enjoy and be proud of. Essentially, initiatives should enable this sense of ownership while addressing the triple bottom line of sustainability. This can be done through innovation, leadership and knowledge. New initiatives could range from: dry and separation toilets; the franchising of public toilets; branding waste; creating plastics from pollution etc.

7.3. Conclusion

Informal settlements in South Africa are home to a large proportion of the country's population and the majority of their inhabitants live in appalling conditions that infringe on their basic human rights. These are issues that have to be adequately dealt with, but as yet, this has not happened. If South Africa as a nation wants to move towards a future that is more sustainable, the problems synonymous with informal settlements have to be addressed.

Since our new political dispensation and the advent of our new democracy; a wide variety of proponents of development have actively tried to promote development and reduce the gap that has been left by past injustices. However, these change agents and their associated developmental initiatives and programs have seen little success in Kayamandi with regards to overcoming the core challenges that consistently impede development. These organisations and their initiatives have ultimately failed in securing development that is sustainable, even though it is widely called for in national policies, plans and programs. The reality is that the environmental and socio-economic issues that are synonymous with an informal settlement such as Kayamandi continue to persist, and have yet to be resolved.

The problem here is a practical one and is reflected in the definite gap in how national policy, plans and programs are implemented, applied and enforced at a local level. There is a lack of appropriate frameworks and plans through which national programs can be implemented at a local level. The realisation of sustainable development, which is an overarching theme in national policy and programs, is a complex and daunting task and strategies geared towards sustainable development lack certain key components.

The research has identified that Kayamandi is subject several environmental, social and economic issues. These challenges have an impact on the livelihoods of residents as well as the environment on a daily basis. Additionally, some of these issues have a detrimental impact on the health of residents, which exacerbates the need for intervention and sustainable development. The literature has identified that sustainable development is the key to addressing and alleviating these issues and challenges. However, sustainable development is dependent on good governance in order to succeed.

Through a thorough review and analysis of national policy plans and programs it can be deduced that the South African government emphasises the need to redress past injustices, to develop and give preference to poor, marginalised and previously disadvantaged communities. Most importantly, these national documents call for sustainable development and reiterate the need to incorporate environmental, social and economic considerations into planning and decision-making as it holds the key to addressing policy objectives. However, the research has indicated that these policy objectives and sustainable development have not been achieved, especially in informal settlements.

Through a thorough literature review and case study analysis of the proponents of development several key findings can be deduced:

1. Governance at a local level in the Stellenbosch Municipality cannot be deemed as “good”, and several interventions are required in order to transform governance at a local level.
2. The implementation of national policy, plans and programs is poor on a local level.
3. Developmental initiatives tend to be linear and reactive and do not collectively incorporate the three pillars of sustainability.
4. There is a clear lack of innovation in the manner in which organisations and institutions approach development in Kayamandi.
5. Communication between stakeholders, organisations, institutions and proponents of development is poor. This is further exacerbated by tedious and bureaucratic procedures.
6. There is a lack of public and community leadership.
7. Most importantly, there is no clear sustainability plan that addresses the issues and challenges prevalent in Stellenbosch and Kayamandi.

The overall objective was to identify the missing link in the municipality’s strategy, and those of other proponents of development, so that suitable recommendations can be given which will aid future developmental strategies in Stellenbosch and Kayamandi. The missing link is twofold: the lack of community and public leadership, and; the lack of an appropriate holistic sustainability plan or framework. The absence of these two factors has meant that development and sustainability in Kayamandi and Stellenbosch has not as yet ensured justice and equality. It has meant that objectives stipulated in PPP has not been reached and has consequently meant that environmental and socio-economic issues continue to persist. This inevitably contributes to an unhealthy urban environment.

However, these issues can be curbed and sustainable development can become a reality. Through appropriate interventions, mechanisms and strategies the various proponents of development can still ensure that policy objectives are met and that sustainable development is continually promoted. The research and thesis has indicated several ways in which this can be done:

1. By promoting and ensuring good governance;

2. By improving policy implementation;
3. Improving service and housing delivery alongside urban integration and the provision of good public spaces;
4. By building and developing public and community leadership as well as recognising the importance of knowledge in fostering sustainable development;
5. Improving communication and developing appropriate communication networks and feedback loops between stakeholders and proponents of development;
6. Implementing unbiased, proactive and innovative initiatives which address the triple bottom line of sustainability; and
7. By making use of suitable assessments and indicators alongside an appropriate, inclusive and holistic sustainability plan or framework.

These recommendations should be used by the proponents of and stakeholders in development, through collaboration and co-management, to actively pursue and incorporate sustainability considerations and developmental initiative design as well as decision-making. By building leadership alongside the design and implementation of a sustainability plan, sustainable development may become a reality from which Kayamandi's residents as well as the greater Stellenbosch town can benefit.

In summary and in conclusion, development and sustainability in Kayamandi is lagging behind that of the rest of Stellenbosch due the public sector's lack of commitment towards transforming Kayamandi. This is shown through the lack of policy implementation and the lack of innovation in trying to address the issues in Kayamandi and the lack of innovation in trying to promote sustainability within the informal settlement. The recommendations given are complex and require that significant interventions to be made. But, the reality within Kayamandi will not change if a collective and concrete effort isn't made by all of the interested and affected parties to systematically address these issues. By starting to transform the way in which the municipality governs the area, through proactive and innovative interventions, through building a knowledge base and creating leaders within government and the community, true sustainability could finally be achieved.

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Addendum 1

Note: Thesis interviews are duplicated here in their original format and no editing was applied

AmaZink Interview, Friday 28 March

Name: Hendrik Lange

Occupation: Marketing Manager

1. Tell me about the origins of AmaZink? Where did the idea come from, and how did it start?

- Originally started as a tavern in 2009 AmaZink wanted to utilise the influx of tourists due to the 2010 WC, (makes sense with regards to the Kayamandi corridor tourism project), the tavern had several problems, with regards to licensing etc. (the current show at AmaZink live is a reflection of that struggle)
- Leon de Wit is a key agent in the growth of AmaZink. He is an entrepreneur and this is basically his community project. (Note: external funding). Alongside Jan Vivier, both of them are currently the owners of AmaZink But they are currently renting from the Ikhaya trust.
- Post 2010 AmaZink live was a brand. This is the brand now. This includes the venue and more importantly the local talent. The brand serves to back the local talent and is a platform to showcase their talent.
- AmaZink was always season driven but is now running and operating throughout the year, which is a first. Is great for employment generation.

2. What were the main challenges in the beginning for AmaZink? And do these challenges remain or have they somehow evolved?

- Initially when it was still a tavern circa 1994, there were issues surrounding liquor licenses etc.

3. How has AmaZink managed to survive and be successful in a place where small business growth has been limited? (I.e. what is your key for success?)

- In plain English, because it is fun and expressive it's not an insurance company and it enables the locals to participate and tell their story. AmaZink has given the locals a platform and a springboard for better things. It is part of the community.
- Most of all it is fun and the locals care about it which makes it safe.

4. Where did initial funding come from?

- Funding was initially sourced from Leon de Wit who used AmaZink as his community entrepreneurial project. Alongside Jan Vivier who is a shareholder (The greater Stellenbosch Development Trust)

5. **How does the community respond towards AmaZink? Are the responses positive or Negative?**
 - Very positive, the community loves the initiative and many facets of the eatery is outsourced to the locals, thus the locals have a real stake in the project.
6. **What would you say has been the largest obstacle standing in the way of successful small business growth and development in Kayamandi?**
 - I'm not really sure, but the entertainment industry is fun. And people enjoy it. Also because everything about AmaZink is local and exclusively from Kayamandi.
7. **How does AmaZink give back to the community and the people of Kayamandi?**
 - It gives them a platform and contributes significantly towards economic development in the area. As said in question 5 many of the facets are outsourced to locals of the community, the entertainment, food, security, cleaning etc. That's why the locals also protect it. i.e. don't bite the hand that feeds you. Drummer Vuyo, is a travel guide and gets business through AmaZink and takes them through tours in Kayamandi.
8. **If someone had to start a business or a charitable project in Kayamandi, how do you think one should approach it?**
 - Do something that is fun and in which the locals can have a stake in. Something they can care about, be proud of and take part in. Food, music and culture.
14. **What organisations do you know of who are actively trying to change the realities within Kayamandi?**
 - Legacy, space 4 development also refer to Jan Vivier and Leon De Wit

Addendum 2

Hope Project Interview, Friday 18 March

Name: Anonymous

Occupation: Anonymous

1. What is the HOPE project, and where did the idea come from?

- Project was created as the vision for Prof. Russel Botman (2007): he's aim was to transform the university and make it more inclusive, moving it away from its apartheid past and the associated legacies.
- Much of what HOPE is about is based on the work of Paulo Freyre and the pedagogy of the oppressed, but by reincarnating it into what Prof. Hattingh calls a pedagogy of hope. A lot of focus for Botman's vision transforming the lack of education, poverty etc. By creating hope for a better future.
- A key point of departure for the project was by asking as a university, how can we use our resources and academic research to transform and overcome these challenges and restore hope. (vision)

2. What are the key objectives of the project?

- Teaching and learning (students, graduation, development), research (improving research through the continent and building partnerships between universities to improve research) and community. In essence is an institution of research, how can our research aid in building a better community not just for us, but for others through teaching and learning. (These are also the three core activities of the university and each of the three vice-rector's portfolio)
- Project is cross cutting and the University has thus positioned itself as a builder of hope by aligning its core activities with the following development themes from the international Millennium Development Goals:
 - Eradicating poverty and related condition
 - Promoting human dignity and health
 - Promoting democracy and human rights
 - Promoting peace and security
 - Promoting a sustainable environment and a competitive industry

From Website - The University has decided to draw everything that it does into these developmental themes – research, learning and teaching, and community interaction. The result has been the formulation of a set of visionary academic initiatives focused on these themes, covering topics that include: the socio-economic rights of the needy under our constitutional dispensation; the use of Geographic Information Technologies for Africa's

development; renewable and sustainable energy supply for developing regions; food security in Southern Africa; rural health and development; human dignity; and invasion biology and environmental sustainability. We call this the HOPE project.

3. Where does funding come from?

- Funding is external and goes through a long screening and consultation process. Donors want to know where their money goes to etc. Donors are approached. There is also a fundraising role associated with the project.
- Stakeholder interaction, cultivation. Based on theoretical fundraising cycle.

From website: We have also receive funding and support from a variety of local and international institutions. In 2011 alone, over 450 corporations, trusts and foundations supported the University of Stellenbosch financially to the tune of R164,9 million.

4. Tell me a bit more about the three core functions of the project (Teaching and learning, research and community interaction) and how this will or has aided in development etc.?

- Refer to question 2, but through improved research and teaching and learning. The university has had spill-of projects such as the Ishack project. (see website: external funding from the Bill and Melinda gates Foundation)

5. Tell me about more about HOPE's initiatives?

- Is about understanding and exploring
- Many of the initiatives are multi-disciplinary and include many departments: agriculture, science social sciences etc., can also be multi-sectoral.
- Use these initiatives alongside the objectives to build HOPE in Africa in correlation with MDG's under each of the MDG's there are several initiatives.
- They include: Food security, youth sport, HIV management, MEDIAAFRIKA, dispute settlement, Tsamahub, water institute etc. (African Doctoral Academy)

6. Have there been any significant challenges associated with the HOPE project?

- Getting people to understand initially. i.e. what does it mean, what is the project about, is it applicable etc. What is a pedagogy of hope?
- getting the word and the vision of the project out there
- how to communicate the message that the university is trying to move from what it was in the apartheid era towards what it is trying to become through the HOPE project.

7. What do you think has been the HOPE project's most significant contribution?

- Thus far it has had significant transformations. And has enabled many coloured people to pursue bachelor's degrees and there after post graduate studies.

Kyle Petzer

Stellenbosch University

- One of the most notable contributions of the HOPE project is that it has enabled the university to get widespread recognition in the media. Where previously Stellenbosch was only mentioned in Afrikaans media such as the Beeld, now English as well as other African media sources has started referring to the university. So clearly transformation has taken a foothold. (Also see page 9 in donor report.

8. What do believe are the main constraints standing in the way of sustainability in informal settlements in general?

- Lack of service delivery, finances, institutional capacity, lack of feedback between stakeholders and change agents.

9. In addition to the HOPE project, what is Stellenbosch University doing in order to promote development in Kayamandi?

- Ishack project

Addendum 3

Kuyasa Interview, Wednesday 28 May

Name: Nomvuyiseko Mtiya

Occupation: Administrator

- 1. In your opinion, what are the main social, economic and environmental issues in Kayamandi?**
 - Un-employment
 - Housing (people live in clustered homes)
 - Safety (there is a very small police station)
 - Poverty
- 2. With regards to your community development projects, what have been the main challenges?**
 - Mostly funding
 - Participation of community leaders and parents
- 3. How did you decide on which projects to pursue and implement?**
 - Kuyasa started with only the sponsorship program because the founder saw that there many patients that she was dealing at the clinic who were HiV + and were either leaving the children with no security or worried that their kids will go hungry when they become sick. Other programs were implemented by volunteers who had the skills and wanted to volunteer long term, it was seen that there is a lack of organised activities for the kids as the only places they kept themselves busy at were the streets.
- 4. How has Kayamandi's residents received your community projects?**
 - The kids love our programs and the parents are really grateful that there is a place that is safe where their kids can go to when coming back from school, and they also learn and are exposed to a lot of things at Kuyasa
- 5. Have you got any new projects planned for the future?**
 - Not at the moment

6. With regards to your community development projects, what role does the citizenry of Kayamandi have in their own development?

- Every member of the community is welcome to be part of our projects. 99% of staff employed are local residents therefore taking ownership of their projects.

7. In your opinion, what are the greatest needs in Kayamandi?

- Housing
- Clinic
- Library
- A recreation centre or multipurpose hall

8. Why do you believe that business or development in Kayamandi is lagging behind the rest of Stellenbosch?

- Local support. Because of high prices the residents end up supporting other businesses.
- Infrastructure, and I guess business management

9. Why do you thin AmaZink Live is so successful, and do you think that others should use their template as a means to build and promote business in Kayamandi?

- I would rather say it is successful becoz it's customers are not kayamandi resident's. they are people who would to experience the feel of the community and well kayamandi is a safer community for visitors to come and experience. There are other successful business run by local residents such as the Home stays and there are tour guides who are able to put food on the table due to the tourists coming in. I must say most people though rent their properties to mostly Somali's as way of business, and they probably feel that it works best for them to rent than to run the shops themselves.

10. What do you think the municipality can do in order to improve the socio-economic as well as environmental conditions in Kayamandi?

- Maybe they can start by working with the community and partnering with NGO's in the community

11. Apart from Prochorus, do you know of any other organisations which are implementing community development projects in Kayamandi?

- Theres' Legacy, Ikaya trust, Lokxion Foundation, Imbadu the others I'm not quite sure about the names but there are more

12. How does one approach the implementation of a chartable project? And, How does one secure funding for such a project, and is the type of funding a factor in ensuring the success of such a project?

- A few of the best way to secure funding is through healthy relationships with funders and transparency. Most of our funders are long term funders who have been faithful to our project
- 13. Are there communication systems or feedback loops in place between the university, NGO's and the municipality? (To aid in decision making and can serve as a valuable form of information)**
- I think each organisation has its own communication or involvement with the Municipality and University, I don't think there is anything that is set in place for a flow of information
- 14. Do you think more can be done in order to raise awareness regarding the current state of environmental affairs within the municipal area (including Kayamandi)?**
- Yes there can be more done with the involvement of all parties and there would need to be driver for the initiative
- 15. What do believe are the main constraints standing in the way of sustainability in informal settlements?**
- I think part of it is corruption and the lack of leaders with a vision and good values
- 16. Why do you think that there is no sufficient evidence of greening in Kayamandi?**
- I think people are not educated enough about it, and most NGO tackle issues that seem to be most important to the community
- 17. Do you think there is room for more organisations to try and aid development in Kayamandi?**
- I think that there are sufficient organisations in Kayamandi, maybe what would need to happen is to make sure that the services go or reach the people who are in need the most and existing organisations to work together to make sure that there is not duplication of beneficiaries so that we can together reach more people
- 18. Do you believe projects like Ishack project are a crucial part of promoting development in informal settlements, and do you believe that similar projects should be undertaken in Kayamandi as well as in other informal settlements?**
- I am not familiar with the Ishack project

Addendum 4

Legacy Development Interview, Wednesday 28 May

Name: Tracey

Occupation: Manager

1. What is your organisation's mission and vision?

- Kayamandi is subject to high population growth, and many of these people live under squatter conditions with limited access to clean water and sanitation, while being exposed to high levels of crime. Additionally, low levels of literacy accompanied by high unemployment rates tend to aggravate health related concerns. Subsequently, it is generally the children who bear the brunt of these consequences and who subsequently suffer the most. Legacy strives to help and assists children and people who suffer from these realities.

2. In your opinion, what are the main social, economic and environmental issues in Kayamandi?

- Unemployment, illiteracy, poverty, HIV/AIDS, Crime, and Drug abuse etc.

3. With regards to your community development projects, what have been the main challenges?

- Funding as well securing volunteers who can help us

4. How did you decide on which projects to pursue and implement?

- We identified what we thought were the main issues (as described in our vision and mission) and our initiatives are geared at towards helping those who are affected by those challenges.

5. How has Kayamandi's residents received your community projects?

- The attitude of the residents have been overwhelmingly positive

6. Have you got any new projects planned for the future?

- Several, but they can be regarded as extensions or upgrades of current initiatives.

7. In your opinion, what are the greatest needs in Kayamandi?

- Housing, infrastructure and social facilities

8. Why do you believe that business or development is lagging behind the rest of Stellenbosch?

- Due to the lack of infrastructure

9. Why is there not any organisation focussing specifically on environmental issues in Kayamandi?

- Environmental issues dealt with on a small scale by Vuya Endweni in Enkanini
- Green Pop has also done greening in Kayamandi as has Leaf a Legacy.
- Heartcapital has started a food pod at Kayamandi High School as well as small business opportunity in the community. They will also be doing a food hub here at Legacy in the future and have plans to grow Spekboom as future programme

10. Why do you think AmaZink Live is so successful, and do you think that others should use their template as a means to build and promote business in Kayamandi?

- They bring tourists in from outside, who have money, while other businesses in Kayamandi focus on the residents who have less money. Thus, the room for growth is marginal.

11. Do you believe that the municipality are delivering on their promises made in the integrated development plan and Spatial Development Framework?

- No, not entirely

12. What do you think the municipality can do in order to improve the socio-economic as well as environmental conditions in Kayamandi?

- The Municipality should upgrade existing sewage systems and housing .It is also essential that refuse removal be addressed, the infrastructure of Kayamandi needs to be uplifted, roads, lighting ,safety and security .The municipality should work in conjunction with the community and existing organizations in order to uplift the area .

13. Apart from Prochorus, do you know of any other organisations which are implementing community development projects in Kayamandi?

- Kuyasa, Greenpop, Vuya Endweni and Heart capital

14. Are there communication systems or feedback loops in place between the university, NGO's and the municipality? (To aid in decision making and can serve as a valuable form of information)

- The communication systems in existence are the following: The Kayamandi Network a meeting of all NGO working in Kayamandi, The Health Network also meets in Stellenbosch as well as The ABBA network. All of these forums discuss issues related to health, welfare as well as substance abuse. The University also does presentations / forums to address issues as well as offer the use of students in various capacities.

- 15. Do you think more can be done in order to raise awareness regarding the current state of environmental affairs within the municipal area (including Kayamandi)?**
 - Yes, Definitely
- 16. What do believe are the main constraints standing in the way of sustainability in informal settlements?**
 - Sustainability is constrained by lack of skills as well as lack of security within the community. Kayamandi is also isolated from the rest of Stellenbosch as a "township" with all the preconceived ideas that this comes with.
- 17. Do you believe projects like Ishack project are a crucial part of promoting development in informal settlements, and do you believe that similar projects should be undertaken in Kayamandi as well as in other informal settlements?**
 - The Ishack project is innovative yes, but it has received negative feedback from community members in Kayamandi. Residents want brick houses and not just an improved shack. The project looks good on paper but it often does not take into account the tensions complexities which are prevalent in communities such as Kayamandi.

Kyle Petzer

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Appendix 1 – Kayamandi Master Plan

